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Knowledge gaps in evaluating labour market and social inclusion policies

Use of counterfactual impact evaluation

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Abstract

This report reviews evidence about the impact of labour market policies of the type funded by the European Social Fund (ESF). Two sources were considered: academic papers over the 2000-2013 publication period and reports produced within the ESF Expert Evaluation Network (ESF-EEN) in the 2007-2013 programming period. These sources were searched for evaluations implementing Counterfactual Impact Evaluation (CIE) methodologies; findings were classified in terms of policy intervention, country, target group, year of intervention and CIE method. A knowledge gap was defined as the absence of CIE for a specific combination of the factors used in the classification. The identified knowledge gaps were then discussed on the basis of three importance criteria. The resulting ordering implies different levels of priority in filling the corresponding knowledge gaps, in light of the EU 2014-2020 programming period.

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Executive Summary

In the 28 member states of the European Union (EU) around 11% of those in working age were unemployed in 2013. One of the main EU's instruments for improving the labour market position of EU citizens is the European Social Fund (ESF), with an annual budget of 10 billion Euro over the 2007-2013 programming period. This sum, which amounted to 10% of the EU budget, has been complemented by additional national funds of about half this size. In the current programming period, available expenditure on ESF policies has been further increased. While the allocation of such a high budget reflects the urgency in improving individuals' labour market positions, it is central to understand if ESF funded interventions are indeed improving EU citizens' labour market prospects.

Within each EU member state, the crucial question therefore appears to be: 'What policies will work (here and now) in order to increase the number and quality of available jobs?' This report aims to summarise existing evidence on the effectiveness of labour market policies in Europe, hence providing help in tackling this important question. The analysis focuses on labour market policies similar to those supported by the ESF. The chosen definition of evidence meets a very high standard: only papers that use *counterfactual impact evaluations (CIE)* are considered. Indeed, in contrast to other types of evaluations, CIE informs about the **causal effect** of a policy on its recipients. The distinctive feature of CIE is thus that it measures the impact of a given policy intervention by comparing the actual situation to the one that would have happened in the absence of the intervention. As such, CIE compares e.g. labour market outcomes of those who benefited from a policy (treated group) with outcomes of a so-called 'control group' of individuals, who are similar in all characteristics to the policy beneficiaries but their recipient status.

In this report, the review of existing evidence of the effect of labour market policies is based on two sources of information. First, a search of **academic papers** is run using keywords related to labour market and evaluation issues in the data bases SCOPUS, RePEc, IDEAS and SSRN. Second, the report relies on CIE of ESF funded interventions reported in the **European Social Fund Expert Evaluation Network database (ESF-EEN)**. This data base managed by the Director General (DG) for Employment, Social Affairs and Inclusion gathers information provided by member states about the contribution of the ESF in each EU country. For the academic papers, evidence published from 2006 until 2013 is considered, while the ESF-EEN database covers the period from 2007 to 2013. The papers extracted from the two databases examine the effect of labour market policies on individuals' job prospects.

For the eight-year academic publication period, 76 papers were retrieved (with an annual average of 9.5) and for the seven-year period covered by the ESF-EEN, 39 evaluations were found (with an annual average of 5.5) that aim at measuring causal evidence of labour market policies. On average, focusing on the years 2007 to 2013 and for the entire EU28, this amounts to only 15 annual sources of evidence on labour market policies. Comparing

the number of CIE found and the amount of ESF-related funds spent annually, roughly one CIE of labour market policies is published for every billion of Euros spent.

This scarcity of CIEs is reflected in the title of this report, where ‘knowledge gaps’ refer to lack of information on the causal effects of ESF policies, given that there is more to report on the gap than on the knowledge. The recognition of this lack of knowledge will hopefully stimulate interest and activity to overcome it in the near future. This goes hand-in-hand with EU provisions for the 2014-2020 programming period, which provide stimuli to increase member states’ use of CIE.

Unit of analysis in this report

The unit of analysis in this report is ‘**findings**’ and not academic papers. *Academic papers* very often do not just describe one policy intervention, but several ones. On average, 76 papers were found for a total of 146 interventions, with 7 being the maximum and 1 the minimum within each paper. Very often, academic papers do not just measure one ‘effect’ of a policy intervention, but aim at measuring heterogeneous ‘effects’. For example, one can measure the impact of training on labour market chances for the young or elderly, for women and men. Each of those impacts is considered a separate finding. Out of 146 interventions, 173 reported findings were identified, with a maximum of 10 and a minimum of 1 per paper.

Focus of the report

This report has three foci: the **first** one is to list countries, target groups and time of intervention that lack CIE results. **Second**, for those interventions for which there is evidence, the report examines whether different papers come to the same conclusions on what policies work and for whom. For this later analysis, the **outcome variable** is usually taken to be the **probability of employment**; a small number of papers also discuss other outcomes, such as the probability of being in regular employment or the probability of remaining in employment. **Third**, the report aims at evaluating the relative importance of each knowledge gap using measures of policy costs and the number of beneficiaries.

The report focuses on labour market policies, which are generally categorised into the following three main areas: 1) **Training**, 2) **Private and public sector employment incentives**, and 3) **Labour market services**. The main results are the following.

1 Results on the knowledge gaps

i) *For which target groups and countries is there lack of evidence?*

Very limited or no CIE evidence is found for the following target groups: **disadvantaged young unemployed, elderly unemployed, low-skilled unemployed, employed, inactive, disabled and women**.

In addition, there is massive contrast of **CIE-based evidence between Eastern and Western Europe**. Evidence on effects of labour market policy is concentrated on the countries Germany, Sweden, Denmark, the UK, France and Portugal. The only Eastern European countries where CIEs have been conducted are Poland, Romania, Estonia, Slovenia, Bulgaria and Latvia (generally only one paper per country).

ii) Which CIE methods are underrepresented in existing studies?

Different CIE methods exist, the most common being Randomisation, Regression Adjustment techniques, Propensity Score Matching (PSM), Difference-in-differences (DID), Regression Discontinuity Design (RDD) and Instrumental Variables (IV). Each of these methods makes different assumptions about the comparability of the treated and the control groups. The assumptions are greatest and most difficult to meet for Regression Analysis followed by PSM, while randomisation theoretically would not need any assumptions.

The best method to use is the one with the least restrictive assumptions. This is because if assumptions of a CIE method are not met, the estimated policy effect can be biased. In general, the choice of the method should be determined by the circumstances under which the policy is conducted and under which the data are collected (including eligibility criteria and policy design, such as in the case of RDD).

Results show that most of the reported findings derive from Propensity Score Matching (PSM). This implies a relatively single sided examination of policy effects and a clear gap in terms of results on methods that relax PSM assumptions, like Randomisation, DID, IV and RDD. While the use of PSM may derive from the apparently simple structure of the method, it may not be always the best method to use.

iii) Which labour market policies are most covered?

The two data sources coherently show that about half of the papers are concerned with the effectiveness of training, while the other half is divided between private and public sector employment incentives and labour market services.

iv) Year of intervention and year of publication

Being published between 2006 and 2013, the papers refer to policy interventions implemented in the time interval from 1986 to 2009. On average across papers, the difference between year of implementation of the policy and year of publication of the CIE results is **8.3 years**. This **time gap** may be upwards biased, because academic papers comprise both working papers and journal articles, the latter usually requiring several years between paper submission and publication. In addition, some of the papers measure **medium or long-term effects**, so that several years need to pass after the end of the intervention before the analysis can be conducted.

In order to measure the sensitivity of these results to the choice of sample period, the report includes a comparative analysis that examines 102 papers published in the period from 2000 (instead of 2006) and 2013. This increase in the time span, however, does not impact greatly on the results found.

2 Summary of results on the effects of labour market policies across countries and time

The effect of labour market policies depends (among other things) on the specific time of intervention, the country, the specific policy features and the concurrent labour market conditions. Nevertheless, the report investigates whether communalities of success and failure of labour market policies can be detected on an aggregated level. This can be done by conducting meta-analyses that summarise the research findings of a variety of different papers.

The second half of this report is dedicated to such a meta-analysis. Like all meta-analyses, also the present one suffers from a relative small sample size, especially once findings are disaggregated into different sub-policy areas and target groups. As a consequence, the more findings are focused on a specific area and target group, the higher is the level of uncertainty of the meta-analysis reported in the following.

Heterogeneity in effects by labour market policy type

Each specific kind of intervention has varying ‘effects’ on labour market chances depending on type of beneficiary, country etc. This gives rise to **effects heterogeneity**. More specifically:

Training

Most interventions of **short classroom/vocational training** and **on the job training** generally show positive effects on labour market integration. **Training starting early** in the unemployment spell, i.e. between months 0 to 6, is generally effective. For treatments starting **during months 7-12** of the unemployment spell, short-term interventions yield positive significant results.

Private and public sector employment incentives

The majority of the positive significant findings are driven by findings on **private sector** incentives interventions (19 out of the 25 findings in that category are significantly positive). Consistent with previous literature, job creation schemes and other types of interventions aimed at the **public sector** are often ineffective. Only two papers are identified that evaluate interventions based on the timing of the treatment during the unemployment spell; both show a significant increase in employment chances if treatment starts **after the 6th or 7th unemployment month**.

Labour market services

Labour market services include job-search assistance, counselling and monitoring, and job placement/relocation assistance. 40% of all findings on policy effectiveness measure insignificant effects on recipients' labour market chances. Among interventions that show significant effects, the **majority refer to job-search assistance**. There is generally no significant gender difference in this effect.

3 Importance of the knowledge gap

Two criteria are applied jointly, which measure the political relevance of the intervention types. They are analysed with reference to known country-specific employment challenges. The criteria are:

- 1) **share of expenditure on each intervention** as a percentage of total labour market policy expenditure in each member state and
- 2) **share of participants in each intervention** as a percentage of total participants in each member state.

By applying both criteria for **Training** programs, 4 member states are found with both expenditure and number of participants in the two top 25% distributions: Austria, Finland, Ireland, and Portugal. However, only for Finland and Ireland there exists evidence of CIEs evaluating training programs addressing their respective key employment challenges.

Regarding **Private and public sector employment incentives**, 4 member states are identified with both expenditures and number of participants in the two top 25% distributions: Greece, Hungary, Poland and Slovakia. None of these member states address their respective employment-problematic areas through CIEs.

For the intervention type **Labour market services**, only one member state is found with both expenditures and number of participants in the two top 25% distributions: the Netherlands. In this member state, CIE methods have been adopted to evaluate interventions addressing the country's key employment challenges.

The report goes further by focusing on different quantiles of the criteria distribution. However, the general result is that even countries with high national spending and many beneficiaries do not employ CIE for measuring the causal effect of labour market policies.

Limitations

Results also show that the majority of member states lack any published CIE evidence in the ESF-EEN database, which is in most cases a direct consequence of missing data or data not designed for the performance of CIE evaluation. As a result, in several cases of CIE evidence collected by member states, often important quantitative information, regarding the size of the effect, the sample size or participants' characteristics, is not available. This type of

information seems neglected from the very first stage of data collection, and henceforth CIE results appear mostly anecdotal.

Using CIE evidence from the academic literature is not a panacea solution either. It is likely that papers which end up being published are those which find an effect of a policy (the so-called '**publication bias**'), so that the positive significant results reported here could be upward biased. In addition, bias stemming from the repeated use of the same database by academic researchers is also possible.

In addition, for different intervention areas authors of published papers are often the same. This indicates the lack of a well-established CIE evaluation tradition, not only among the member states but also in the academic world.

Conclusions

The meta-analysis presented in this report can hopefully serve as a map for guiding the planning of future CIE of labour and social inclusion policies in Europe. The report provides additionally some indications on the effectiveness of the interventions such as training, private and public employment incentives, and labour market services. The main message of the report is that, given the importance in terms of number of participants involved and money spent, the measurement of causal effects of labour market policies using CIE has received too little attention so far. A number of recommendations can be made for closing these knowledge gaps in the future.

Recommendations

1 Plan data collection ex ante

The lack of information on causal policy effectiveness could be explained by the specific data necessities of CIE. Generally, data collection needs to be planned before the introduction of the policy in order to make it possible to have information **both on individuals that are** (treated group) **and individuals that are not beneficiaries of the policy** (control group).

Knowledge of CIE methods and planning skills are essential. The beginning of the new ESF programming period 2014-2020 appears particularly fit for **integrating this phase in the current practice of ESF management**.

It is possible to envisage that several stakeholders could jointly work on the planning phase of CIE, including ESF Managing Authorities of member states and the European Commission. The author of this report, the Centre for Research of Impact Evaluation (**CRIE**) of the European Commission Joint Research Centre (DG JRC), is committed to provide methodological support to member states and DG EMPL in order to make the planning of data collection feasible, to learn from other existing studies and best practice, to provide

help on current planning and evaluation and to build networks among CIE evaluators in different member states.

2 Perform recurrent CIE

The remedies to improve job creation and quality in one country today may differ from those needed in another country tomorrow. This is called lack of **external validity**.

Even if information on CIE is available for a country at some point in the past, it is important for the same country to plan to perform a CIE also on the current implementation of the policy. This implies that CIE should be performed **recurrently**. This will create a virtuous cycle of policy design of evaluation, where evidence from the effectiveness of the policy in the past is used to devise better policy for the future.

Conducting CIE appears even more important in the current presence of **knowledge gaps** as documented in this report.

3 Disseminate information and data of past CIE

While there is in general a lack of external validity, lessons on how to conduct a proper CIE can be drawn from existing experiences and data.

In order to make existing studies available, it is recommended that the **European Commission develops an easily accessible archive** listing all relevant CIE studies, such as the ones analysed in this report. This database could be updated regularly, and made to include records of all existing academic studies using CIE for estimating the effect of labour market policies. For each study, information on the policy, the country and time of intervention, the target group, CIE method used and found effect should be provided. Such an up-to-date database is envisaged to serve as a key tool for both policy makers and academic researchers.

It is also recommended that the European Commission aims to **collect individual data used in current and past CIE** of the type reviewed in this report. These data should be made as widely available as possible. Data availability would help to foster a more widespread CIE culture, and stimulate application of CIE methods among practitioners and academics.

1 Objective and scope

1.1 Motivation and definition of knowledge gaps

Europe is currently facing a particularly challenging situation both in terms of labour markets and of social inclusion, a situation that is further compounded by tightened national budgets. Together with the very high levels of expenditure in the past programming period (€75 billion budget), this makes the need for more evidence on the effects of European Social Fund (ESF)-supported interventions targeting these areas even more urgent and important. The European Commission (EC) has correctly emphasised the importance of evaluations of the *impact* of policies for the 2014-2020 programming period. This report aims to document what is known in this field, at the beginning of this programming period.

While measuring the impact of a given intervention can be achieved using several different methods, **counterfactual impact evaluation** (CIE) methods are the most adequate and prominent tools in the context of labour market and social inclusion policies.

CIE methods compare the actual outcome for the individuals involved in the policy intervention with the one that would have happened in the absence of the intervention (**counterfactual**). This comparison informs on the **causal effect** of the intervention, ruling out alternative explanations for the observed change. These methods rely on data for participants and non-participants of the intervention under scrutiny, which requires proper and timely collection of data. CIE-based evaluations therefore require a well-designed evaluation plan, technical capacity and monetary resources for the data collection.

This report aims at

1. reviewing the CIE evidence on ESF-type interventions available until 2013, hence defining possible areas of priority for CIE of ESF-type interventions in the 2014-2020 programming period, while
2. highlighting critical aspects for the production of timely CIE, that need to be addressed in future evaluations of ESF-type interventions, and
3. providing policy implications of the above.

To this end, this report first identifies the interventions that have been evaluated both by Experts in the ESF context, using the related ESF Evaluation Network (EEN) database, and by the academic labour policy literature. The areas where knowledge is more scarce are defined as **knowledge gaps**, where evidence, of CIE type, relates to a specific area of intervention and a specific target group.

DEFINITION: In this report a **knowledge gap** is defined as the lack of CIE-based evaluation of an ESF-type intervention. Given that interventions are directed to a target group, the knowledge gaps are identified jointly by intervention area *and* target group.

This analysis aims to inform policy makers, ESF managing authorities and the academic world about the intervention areas for which CIEs are missing and where evaluation efforts and resources could be concentrated in the future. This will hopefully contribute to the development of a shared culture of evaluation of ESF funds, influencing the planning of future evaluations, and possibly providing the first **archive** of evidence on what works for whom, in the areas of employment and social inclusion.

Different CIE methodologies are reviewed next.

1.2 Why CIE methodologies

The definition of a knowledge gap used in this report, i.e. the lack of CIE-based evaluation, reflects the importance of CIEs with respect to other types of evaluations. The CIE is a microeconomic type of evaluation, aimed at assessing the **causal** relationship between participation in an intervention and the outcome of interest (e.g. employment probability). It requires therefore comparing the participants' outcome in the actual situation with the one that would have occurred had they not participated. This is called the *fundamental evaluation problem*, as it is impossible to observe the outcomes of the participants in the latter situation, i.e. in the counterfactual state. Therefore, it is necessary to find an adequate *control group* of non-participants to which the participants group could be compared with.

The two groups should be as similar as possible so as to ensure that the difference in their outcomes can be causally attributed to the intervention. Usually, groups of participants and non-participants are different in dimensions other than participation, either because the intervention is targeted to a particular group of individuals or because individuals self-select into the intervention. In either case, this leads to selection bias, making it misleading to simply compare the outcomes of participants and non-participants.

CIE methods are statistical and econometric techniques that estimate the causal effect of an intervention on participants. The outcomes of participants and non-participants are compared, while taking into consideration the selection bias problem by controlling for pre-existing differences among the two groups. Depending on the data available, different CIE methods can be used.

The most compelling evidence arises undoubtedly from an experimental setting, whereby individuals are allocated randomly to either one of the two groups (participants or non-participants). This eliminates the selection bias problem because, given the randomised assignment, the two groups are similar in all respects but the intervention. However, it has been observed that this design decreases external validity, defined as the possibility to generalize results to different contexts. When experiments are not economically or ethically feasible, non-experimental evaluation methods can be applied to ensure the comparability

of both groups. Non-experimental methods include *Regression*¹ and *Matching* methods, *Difference-in-differences*, *Regression Discontinuity Design* and *Instrumental Variables* (see DG EMPL Guide, 2012, for descriptions of each method).

CIE methods are the most appropriate option to estimate the **causal** effect of an intervention. This evaluation approach is part of a broader evaluation culture, that spans from evaluating and monitoring the *implementation* and *evolution* of the intervention (monitoring and process evaluation), evaluating the *impact* in the economy/society as a whole (macroeconomic evaluation) to evaluating whether the effect found was the best that could have been achieved with the same cost (cost-benefit analysis).

1.3 ESF relevant policy themes and interventions

The ESF objectives are aligned with the Europe 2020 Strategy and act mainly in the area of employment and social inclusion.

In the 2007-2013 regulation² ESF priorities were the following: 1) increasing adaptability of workers, enterprises and entrepreneurs; 2) enhancing access to employment and the sustainable inclusion in the labour market of job seekers and inactive people; 3) reinforcing the social inclusion of disadvantaged people and 4) enhancing human capital. For the convergence objective, ESF also supports (i) expanding and improving investment in human capital and (ii) strengthening institutional capacity and the efficiency of public administrations.

In the 2014-2020 regulation³, ESF thematic objectives are: 1) promoting employment and supporting labour mobility; 2) investing in education, skills and life-long learning; 3) promoting social inclusion and combating poverty and 4) enhancing institutional capacity and efficient public administration.

In general, **employment**, **social inclusion** and **human capital** can be identified as three broad priorities under both programming periods. These are overall objectives to be achieved through ESF-funded interventions that can be of numerous types. The Final Synthesis Reports of the ESF-ENN give an overview of the types of interventions that have been carried out in the past to achieve these objectives.

Table 1 combines information from the *Final Synthesis Report on Access to Employment* (ESF Expert Evaluation Network, 2012a), the *Final Synthesis Report on Social Inclusion* (ESF Expert

¹ Regression methods can be considered similar to matching methods as they rely on the same identification assumption that all differences between participants and non-participants are observable to the evaluator (selection on observables or conditional independence assumption). Accordingly, this method is included in the CIE category. However, Propensity Score Matching is generally a more appropriate CIE method, because, in contrast to regression, it is non-parametric and includes a check for common support.

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:210:0012:0018:en:PDF>

³ <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R1304&from=EN>

Evaluation Network, 2012b) and the *Final Synthesis Report: Main ESF Achievements*⁴ (ESF Expert Evaluation Network, 2014) to give an overview of the types of interventions and the number of countries that have carried them out in the programming period 2007-2013.

As it is clear from Table 1, the types of intervention that belong to the two objectives, “Access to Employment” and “Social Inclusion” often overlap, as the ultimate objective for both is the promotion of employment. The main difference between “Access to Employment” and “Social inclusion” interventions seems to lie in their respective target groups: whereas “Access to Employment” interventions aim to bring the unemployed and inactive into sustainable jobs, “Social Inclusion” interventions focus on specific target groups with additional disadvantages in the labour market.

Interventions with a “Human Capital” objective do not always coincide with those categorised under the other two objectives, because they may include, in addition to trainings, programmes aimed at early school leavers or individuals at risk of dropping out of school, whose ultimate objective is not employment but increasing time spent in school. In the present report, the human capital dimension is captured by looking only at training interventions to ensure comparability (see below), in order to cover interventions with the ultimate stated objective of gaining employment.

Table 1 shows that the interventions funded through the ESF are mainly of three types:

1. Training:

This area of intervention encompasses measures aimed at enhancing the human capital of participants, such as classroom or on-the-job training, which provide either more general education (e.g. language courses) or specific vocational skills.

2. Private sector employment incentives and public sector employment:

The interventions falling in this category aim at giving work experience to unemployed individuals in order to keep them in contact with the labour market. They may be:

- **Private sector employment incentives**, which aim to change the incentives of private sector employers for hiring new workers or for keeping existing workers at risk of redundancy. Examples include hiring subsidies and wage subsidies.
- **Start-up incentives or grants**, which help unemployed individuals to start their own business. Examples include schemes of financial assistance, tax incentives or cost reduction for the setting up of a new company.
- **Public sector employment**, which aims to directly create jobs in public firms or in public activities that produce public goods or services. Examples include public employment schemes which provide working opportunities in

⁴ <http://ec.europa.eu/esf/main.jsp?catId=3&langId=en>

areas of the public interest, e.g. infrastructure, subsidised by the employment agencies.

3. **Labour market services:**

The interventions in this category aim at supporting the unemployed throughout their job search process. They may include job search assistance, career counselling and job placement assistance.

These three intervention areas⁵ cover the interventions marked with a tick (✓) in Table 1. These coincide with the interventions that have been most commonly used by MS to reach the objectives of employment and social inclusion.

These three broad categories of interventions correspond to the classification of Active Labour Market Policies (ALMP) used by both Eurostat and the Organisation for Economic Co-operation and Development (OECD). The classifications used in this report are chosen accordingly to the specificity of data sources used for the review of interventions' CIEs.

In order to identify the knowledge gaps using a comprehensive amount of information, in what follows two main data sources are employed. First, the academic literature is reviewed to identify relevant impact evaluation studies of interventions in the fields of labour and social policies as well as second examine the information provided by ESF Expert Evaluation Network (EEN) in the ESF-EEN database.

The present report therefore contributes to the existing evidence on ESF interventions by providing a comprehensive and up-to-date review of the CIEs conducted until the year 2013. The academic literature is considered first, since it is the most comprehensive source of information on impact evaluations of active labour market and social policies. Although academic research does not specifically cover ESF-funded interventions, it offers evaluations of similar types of programs, aimed at the same thematic objectives as the ESF. Furthermore, the academic literature provides a detailed discussion of the findings from evaluations. This allows to analyse the direction and significance of estimated effects of interventions reviewed. From this source, CIE evaluations from 2000 to 2013 are selected.

Secondly, the evidence drawn from the ESF Expert Evaluation Network (as reported in the ESF-EEN database) is discussed. This data source allows to identify the state of specific knowledge on ESF-funded interventions. The evaluations in this database are done on interventions financed by ESF in the programming period 2007-2013, whereas for the academic papers the funding source for the intervention is not known. Hence, it is possible that a CIE evaluation from an academic paper overlaps with a CIE evaluation in the ESF-EEN database.

⁵ Note that when referring to *Training, Private sector employment incentives and public sector employment or Labour market services*, "intervention area" and "category of interventions" are used interchangeably.

In contrast to the academic literature, the information in the EEN database on the findings per se is limited, which prevents us from offering a detailed discussion regarding the estimated effects of the interventions having been subject to an evaluation.

Since these two data sources are structured very differently, two separate analyses are performed, in order to explore the totality of the different information and to allow a better consistency with the data provided in each source. The source-specific classifications of interventions, addressed target groups and search criteria are discussed in more detail in the following sections.

On the other hand, in order to offer a clearer interpretation and a more general discussion of the evidence resulting from the two data sources, in the last section of the report they are compared on the basis of three common criteria. The comparison is based on intervention target groups, regardless of the intervention area, thus overcoming the limitation resulting from the two different source-specific interventions classifications.

Table 1: Types of ESF interventions in the EEN Final Synthesis Reports

Objective: Access to Employment			Objective: Social Inclusion			Objective: Human Capital		
<i>Intervention</i>	<i>No. of MS</i>	<i>Covered</i>	<i>Intervention</i>	<i>No. of MS</i>	<i>Covered</i>	<i>Intervention</i>	<i>No. of MS</i>	<i>Covered</i>
Vocational skills development	23	✓	Training programmes	27	✓	Improving education provision	n/a	
Developing employability skills for workplace	17	✓	Counselling	26	✓	Supporting young people to make good transitions from school to work	n/a	✓
Child care and family support	17		Integrated pathways	25	✓	Providing training opportunities for adults	n/a	✓
Work experience / internships	15	✓	Coaching	21	✓	Improving research base	n/a	
Support for self-employment/start-up	14	✓	Raising awareness	20	✓	Tackling health issues	n/a	
Employment subsidies	11	✓	Work experience	9	✓			
Advice and guidance	10	✓	Supported employment	7	✓			
Training for employees	9	✓	Salary subsidies	7	✓			
Institutional development (PES)	9		Educational initiatives	7	✓			
Support to find work, interview skills	7	✓	Entrepreneurship / start-up	5	✓			
Personal development	6	✓	Info. advice / guidance	3	✓			
ILMs / social firms	6		Job search help, advice	3	✓			
Post job entry support	3		Aftercare / follow-up	3				
Support for progression	3	✓	Language skills	3				
Others	13		Preventive health care	2				
			Reconciling family & work	2				
			Gaining qualifications	2	✓			
			Others	22				

Source: EEN 'Final Synthesis Report on Access to Employment', 'Final Synthesis Report on Social Inclusion', 'Final Synthesis Report: Main ESF Achievements' (2012a, 2012b, 2014).

Differently from the EEN thematic synthesis reports which provide specific information on access to employment and social inclusion, the final synthesis report on main ESF achievements' does not contain information about the number of MS which carried out interventions aimed at enhancing human capital.

✓: Interventions covered by our classification of intervention areas (Training, Private sector employment incentives and public sector employment, Labour market services).

1.4 Limitations of this report and the Counterfactual Evaluation Archive

Possible limitations and implications of this review are discussed in this section.

The selection of papers from the academic literature may be biased because of the publication procedure of evaluations. The probability of being published may indeed be higher for papers which show significant results for interventions. Focusing on those evaluations, in the form of both working papers and published papers, thus not taking into account evaluations resulting in null effects, may lead to a biased estimation of the effectiveness of interventions.

Also, it has to be noted that due to the lag between the year of intervention and the publication date, the publication procedure induces a delay in the process of informing policy makers about the effectiveness on interventions.

The reviewed interventions show a high degree of heterogeneity both in terms of programme specific characteristics, like the target groups to whom interventions are addressed and the countries where they are implemented, and in terms of results. The heterogeneity of the evidence weakens the generalisability of results, not allowing to draw overall conclusions about the interventions' outputs. The external validity, that is the possibility to infer about the effectiveness of interventions to a wider population, might be therefore very limited.

On the other side, a clear signal emerges from our analysis, regardless of the intervention area, about the feasibility of CIEs. First of all, counterfactual evaluations are performed only in some European countries. Secondly, in countries like Germany where the effort in evaluating is amongst the highest, different evaluations are based on the same, few, data sources. This, in addition to weakening the representativeness of results, signals a grave scarcity of available data source, which needs to be covered in order to make CIEs feasible in all countries.

This need of data collection can be addressed through an ex-ante planning of interventions which contemplates the evaluation phase and therefore also a systematic data-gathering into intervention implementations.

It is therefore noticeable that the CIE culture needs to be fostered among MS, both for the purpose of intervention planning which can take into account CIEs in terms of data requirements and in order to ensure a correct implementation of counterfactual methodologies for policy evaluations.

For this purpose, CRIE will in addition to this report produce the Counterfactual Evaluation Archive (CEA), listing the CIEs carried out in several countries and reviewed here. This Archive will be updated regularly in order to provide detailed information about the existing evidence

on interventions effectiveness, offering thereby valuable examples on this. In addition, the CEA encourages the implementation of CIEs in order to fill the knowledge gaps discussed in this report.

1.5 Structure of the report

The remainder of the report is organised as follows. Chapter 2 discusses strategies to identify gaps in the academic literature. The search procedure adopted for this data source is described first. An overall assessment of the knowledge gaps identified in the academic literature is discussed next, distinguishing among the different areas of interventions. Finally, the estimated effects of evaluated interventions are summarised.

Chapter 3 discusses knowledge gaps in the ESF-EEN database. First, the specificity of this source is discussed and the search criteria for this database are stated. Next the identified knowledge gaps are exposed and results are summarised.

Chapter 4 presents the criteria used to evaluate the knowledge gaps, and discusses the identified gaps on the basis of these criteria.

Chapter 5 provides conclusions and Chapter 6 reports recommendations.

2 Identification of gaps in the academic literature

The aim of this chapter is to identify the knowledge gaps, i.e. areas where there is a lack of CIE-based evaluations of interventions suitable to be evaluated with such methods, within the academic literature.

Differently from Chapter 3 where gaps specifically regarding ESF-funded interventions are identified, thanks to the information provided by the ESF-ENN, the present chapter considers evidence present in the academic literature on interventions aimed at the same ESF thematic objectives and falling in the same categories, regardless of the financing sources. In the following these intervention areas are called “ESF-type” interventions.

This chapter contributes to the existing literature on ALMPs by performing a review of policies’ CIE which have been conducted from 2000 onwards. The classification of ALMPs taken by the most recent and comprehensive review present in the literature, Kluve (2010), is employed here.

While Kluve (2010) uses a meta-analytical approach to discuss the effectiveness of intervention through 137 program evaluations from 19 European countries conducted until 2005, the present chapter focuses on the identification of CIE evaluations and on their heterogeneity in terms of methodology, data used, distribution among countries, time periods and groups targeted, in order to highlight the lack of CIE evidence on past interventions and the relevance of the identified gaps along these factors.

Since ESF-type interventions may have taken place also outside Europe, the search is not restricted to interventions in EU countries, but considers also countries which are members of the OECD. Further, the search is extended to papers appeared before 2013.

The classification used in the economic literature by Kluve (2010), used here, corresponds to the one provided by both Eurostat and the OECD, presented above. The search methodology is applied to find corresponding evaluations within the academic literature. The type of information collected from the resulting evaluations is also listed, to identify the areas where there is a lack of evidence and to summarise the available findings.

Finally, the gaps are identified and CIE-based findings are discussed for each category of intervention by analysing the sign and significance of estimated effects.

2.1 Search methodology

SCOPUS,⁶ **RePEc IDEAS**⁷ and **SSRN**⁸ are three databases among the most widely used for academic purposes; they were the sources of articles and/or working papers used here.

In each of these databases, the relevant studies were identified for the purpose of this report by employing the following “protocol” (see Higgins and Green 2005 as cited in Kluve 2010): the query was narrowed down along two dimensions: **keywords** and **date of publication**. The selected articles/working papers were published from **2000 onwards**; the search used keywords related to labour market and evaluation issues, specific for each intervention (e.g. ("labour market" OR "labor market" OR "job") AND ("evaluation" OR "impact" OR "data" OR "intervention" OR "program")), in addition to intervention-specific keywords).

It should be highlighted that there was no restriction in the query regarding the target groups or the evaluation methods to ensure that the search would deliver the most comprehensive set of results along these dimensions.⁹ Furthermore, the search was not restricted to interventions in EU countries only, as ESF-type interventions may have taken place elsewhere. In order to ensure comparability, however, the non-EU countries that are included are members of the OECD.

The queries delivered a large amount of results, many of which were not relevant for the purpose of this report. The papers included in the analysis were chosen on the basis of their closeness to the ESF-type interventions. The criteria used in this selection are described next.

The papers included in this report are evaluations of interventions aiming at individuals, even if the interventions involved or targeted firms. Examples of such interventions are training or hiring subsidies. The unit of evaluation in the selected papers is **individuals** and the evaluation methodology **data-driven**. This means that studies that rely solely on theoretical models, simulations or other qualitative evaluation strategies were disregarded.

Applying this protocol to the results from the 3 academic search websites in October 2013, **102** relevant papers were identified from 2000 onwards, based on CIE methods that are covered in this report: **53** papers evaluating **training** interventions; **34** evaluating **private sector employment incentives and public sector employment** interventions; and **15** evaluating **labour**

⁶ www.scopus.com

⁷ <http://ideas.repec.org/>

⁸ www.ssrn.com

⁹ The search procedure adopted for all databases and for the three intervention areas is described in the Appendix of the current chapter.

market services interventions. Among these, the total number of papers from 2006 onwards is 76.

Working papers and articles after October 2013 are not included in this research.

In case of evaluations presenting both short-, medium- and long-term effects of the given intervention, only long-term effects are reported, to reduce the bias which may be induced by *lock-in* effects present in the short-run. These effects are in fact well-known to negatively affect the impact of ALMPs in terms of individuals' employment probability in the short-run (e.g. Van Ours 2004, Heckman, LaLonde and Smith 1999). This happens because during the treatment, participants are likely to reduce their job-search efforts, whereas the non-participants are likely not to adjust their job-search efforts, thus increasing their chances of becoming employed, which may give rise to an overall negative effect of the intervention in the short-run. However in the long period the presence of external factors may interfere with the intervention effects.

Academic papers very often do not just describe one policy intervention, but several. Therefore, in order to provide a comprehensive review of the information provided in the selected academic papers, the unit of analysis of our report is '**findings**' and not papers. On average, the 76 papers from 2006 onwards contain a total of 146 interventions, with 7 being the maximum and 1 the minimum. Very often, academic papers do not just measure one 'effect' of a policy intervention, but aim at measuring heterogenous 'effects'. For example, you can measure the impact of training on labour market chances for the young or elderly, for women and men. Each of those are called separate findings. For the 146 interventions considered, there are 173 reported findings with a maximum of 10 and a minimum of 1 per paper. As will be discussed in the following chapter, the same considerations apply to the ESF-EEN data base, which reports the unit of interventions and may present multiple findings per intervention.

2.1.1 Criteria for the identification of knowledge gaps

The available findings, and the resulting knowledge gaps, are presented by area of intervention, classified as belonging to one of the three intervention areas mentioned above:

- *Training;*
- *Private sector employment incentives and public sector employment;*
- *Labour market services.*

Papers from 2000 to 2013 identified within each of these broad categories were categorised under narrower sub-intervention so as to pinpoint knowledge gaps at a more disaggregated level.

In addition, for each relevant paper, the following information was collected in order to identify knowledge gaps:

1. Target group of the intervention

Based on Annex I of the 2014-2020 ESF regulation, a number of target groups were identified for which it would be advisable to have evidence on. These target groups are: *unemployed*, *young unemployed* (unemployed up to age 25), *disadvantaged young unemployed*, *elderly unemployed* (older than 55 years), *long-term unemployed*, *low-skilled unemployed*, *employed*, *inactive*, *disabled* and *women*.¹⁰ In our tables, there is an additional category labeled “untargeted” for those programs that have employment as an ultimate objective but which do not restrict eligibility to a group or another.

2. Evaluation method

In the tables of available findings showed in the next section, only papers that use CIE methods are considered.¹¹ When summarising the findings from CIE papers, the specific CIE method used is also presented. As mentioned above, the CIE methods are:

- *Randomisation*
- *Regression*
- *Propensity Score Matching (PSM)*
- *Difference-in-differences (DID)*
- *Regression discontinuity design (RDD)*
- *Instrumental variable (IV).*

Since CIE methods are generally not applied to duration outcomes, they are excluded from the search. Duration models are therefore not covered in our review.

The fact that there might be many CIE-based evaluations for an intervention area and target group does not necessarily imply that there are no knowledge gaps whatsoever. Indeed, in the evaluation literature there is concern that the findings of evaluation studies are not *externally valid*, i.e. the findings may not apply to other periods of time, populations or geographic areas such as regions or countries. Accordingly, the **country** where the intervention took place is recorded, as well as the **year of the intervention**. The year of intervention generally refers to the year when a particular intervention started. There are cases where a range of years is reported; this simply means that the paper evaluates interventions that started during that

¹⁰ A distinction is made between Interventions specifically *targeted* to women and evaluations which look at *heterogeneous* effects separately by gender. Heterogeneous effects are not included in the main tables but are discussed at the end of each section.

¹¹ Using the search tools, only 3 papers (2 for *Training* and one for *Private sector employment incentives and public sector employment*) of those found did not use CIE methods. These papers were excluded.

specific period of time, i.e. looks at the effects of the intervention on participants who entered the program at any point during that period of time. It is important to stress that this range has nothing to do with the duration of a certain intervention.

2.1.2 Criteria for summarising the evidence from CIEs

In addition to the information collected in the tables of available findings, in order to provide a more detailed summary and a discussion of the significance of effects of interventions, the following information was also collected:

1. **Type of data used** in the evaluation: administrative data, general survey data, survey data specific to the intervention, or a combination of these sources.
2. **Time of evaluation**, defined as the time between when the intervention took place and when the evaluation is made: *short-term* if less than one year, *medium term* if between 2 and 3 years and *long term* if more than 3 years. The results in the tables summarising the number of findings refer to the longest time horizon considered in each paper.¹²
3. **Main findings:**¹³ this is the main effect of the intervention. This information is summarised in three categories: *positive significant*, *insignificant* and *negative significant*. One issue to note is that results are classified as positive significant whenever the authors themselves categorised them as positive significant. Some authors might be more willing than others to consider effects significant at the 10% level as statistically significant. As a result, the positive significant category contains from 1% significance level to 10% significance level.

This information will be discussed through the following tables containing the number of findings on each intervention area by direction and significance of effects. Since the meta-analysis provided by Kluve (2010) on the effectiveness of European ALMPs covers papers published up to 2005, for the discussion on the available findings the summary of the evidence is restricted to the more recent period, i.e. **from 2006 onwards**.

¹² For example, a paper with 8 years of data after the treatment start may look at short-, medium- and long-term effects of the given intervention. However, only long-term effects are considered here.

¹³ The evaluation method and estimated effects are taken at “face value”. It should be highlighted however, that some papers could have used a more appropriate CIE methodology than the one they actually use with the data available. Furthermore, some CIE methods rely on stronger assumptions than others (see DG EMPL Guide, 2012).

2.2 CIE based findings

2.2.1 Intervention area 1: Training

Evaluating the gaps

Total

Method

53 unique papers are identified that evaluate training interventions.¹⁴ One CIE method in particular - propensity score matching - is by far the most frequently used. Note that the 53 unique CIE papers do not evaluate unique interventions: some papers may evaluate the same intervention. The outcome variable most widely used is **employment probability**, but other measures such as the **probability of exiting unemployment** or the **probability of remaining employed** for a specific period of time are sometimes used. In the case the outcomes are defined as, for example, the probability of transition to unemployment, they are recoded so that they all have a positive meaning.

Target groups

Table 2 shows that **the unemployed category is the most populated, with 40 entries evaluating interventions from both the EU (35) and the OECD (5)**. Since there are 10 different target groups, on average, one should expect to find 5 articles for each target group (dividing the number of papers identified for training, 53, by the number of target groups, 10, one finds approximately 5). In reality, there was no papers that evaluate interventions aimed at the elderly unemployed (age 55 and above) or at the inactive. Hence, based on this search, there appears to be clear knowledge gaps in these two categories.

Some target groups - disadvantaged young unemployed, long-term unemployed, low-skilled unemployed, employed, disabled and untargeted – have only been evaluated in 1-3 studies, so there is a clear lack of evidence with respect to these groups as well. In the disabled category, there also appears to be a need for more analysis on EU data, as the single entry is for the other OECD countries. More needs to be known on training interventions for the employed as well – only one entry refers to the EU, and the two OECD entries refer to the very same intervention in the US.

¹⁴ Note that in Table 2, there are 55 entries from 53 unique papers. This is because two papers, Andersson et al. (2013) and Heinrich et al. (2006) evaluate interventions aimed at different target groups.

Table 2: Available findings on training

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Fitzenberger, Osikominu, Völter (2006)	DE (W)	1986-1988; 1993-1995
		Winter-Ebmer (2001)	AT	1987
		Cockx (2003)	BE	1989-1993
		Bergemann, Fitzenberger, Speckesser (2009)	DE (E)	1990-1993; 1994-1999
		Fitzenberger and Prey (2000)	DE (E)	1990-1994
		Lechner (2000)	DE (E)	1990-1993
		Puhani (2002)	PL	1992-1996
		Fitzenberger and Speckesser (2007)	DE	1993-1994
		Fitzenberger and Völter (2007)	DE (E)	1993-1996
		Lechner, Miquel and Wunsch (2007)	DE (E)	1993, 1994
		Lechner, Miquel and Wunsch (2011)	DE (W)	1993-1994
		Kluve, Lehmann and Schmidt (2001)	PL	1993-1995
		Kluve, Lehmann and Schmidt (2008)	PL	1993-1995
		Fredriksson and Johansson (2003)	SE	1993-1997
		Jespersen et al. (2008)	DK	1994-2004
		Sianesi (2001)	SE	1994
		Sianesi (2002)	SE	1994
		Sianesi (2008)	SE	1994
		Rodriguez-Planas and Benus (2010)	RO	1999
		Biewen et al. (2012)	DE	2000-2002
		Fitzenberger et al. (2013)	DE	2000-2003
		Kluve et al. (2013)	DE	2000-2002
		Kopf (2009)	DE	2000
		Lechner and Wunsch (2009)	DE (E)	2000-2002
		Kluve et al. (2012)	DE (W)	2000, 2001, 2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Rinne, Schneider and Uhlendorff (2011)	DE	2002
		Rinne, Uhlendorff and Zhao (2012)	DE	2002, 2003
		Rotar (2012)	SI	2002, 2003
		Stephan and Pahnke (2011)	DE	2003
		Neubäumer (2010)	DE (W)	2003
		Dmitrijeva (2008)	LV	2003-2006
		Wolff and Jozwiak (2007)	DE (W)	2005
		Aldashev et al. (2010)	DE	2006-2007
		McGuinness, O'Connell and Kelly (2011)	IE	2006-2008
	OECD	Hotz et al. (2006)	US	1989-1990
		Gerfin and Lechner (2002)	CH	1998
		Prey (2000)	CH	1998
		Andersson et al. (2013)	US	1999-2005
		Heinrich et al. (2009)	US	2003-2005
Young unemployed	EU	Brodaty, Crepon and Fougere (2002)	FR	1986-1988 and 1995-1998
		Larsson (2003)	SE	1992, 1993
		Hämäläinen and Tuomala (2007)	FI	1998-1999
		Dorsett (2006)	UK	1998
	OECD	Van Reenen (2003)	UK	1998

Target group		Reference	Intervention characteristics	
			<i>Country</i>	<i>Year of intervention</i>
Disadvantaged young unemployed	EU	Pessoa et al. (2009)	FR	1996-1998
		Ehlert, Kluve and Schaffner (2012)	DE	2007-2009
	OECD	Perry and Maloney (2008)	NZ	1993-1994
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU	Bernhard and Kruppe (2012)	DE	2005
	OECD			
Low-skilled unemployed	EU	Rosholm and Skipper (2009)	DK	1994
	OECD			
Employed	EU	Cheron et al. (2010)	FR	1998
	OECD	Andersson et al. (2013)	US	1999-2005
		Heinrich et al. (2009)	US	2003-2005
Inactive	EU			
	OECD			
Disabled	EU			
	OECD	Aakvik (2001)	NO	1989-1993
Women	EU			
	OECD			
Untargeted	EU			
	OECD	Fairlie et al. (2012)	US	2003-2005
Total		55		

Source: Authors' summary based on literature review.

Year of intervention

Table 2 shows that the majority of papers deal with interventions that started prior to 2005. There are only 3 papers that evaluate interventions starting after 2005, 7 that look at interventions initiated over a period of time that straddles across 2000 and one over a period of time that straddles across 2005.¹⁵ **Hence, whereas more is known about older interventions, newer interventions have been much less evaluated. This leaves a gap that should be addressed as soon as possible** in order to not delay the process of informing policy makers about the effectiveness on interventions.^{16 17}

Country coverage

There is a large degree of homogeneity in terms of country coverage. **Out of 53 CIE papers, 23 papers deal with interventions conducted in DE.** Note that in this table and the ones that follow a distinction is made between DE, DE (E) and DE (W) because some articles base their analysis on pooled data from the whole of DE, and others restrict their analysis to only one part of the country. Hence, in analysing the findings in such papers, one cannot ignore this fundamental distinction.

One can trace the preponderance of German evaluations of training interventions back to the fact that, with the introduction of the so-called Hartz labour market reforms taking place in DE between 2003 and 2005, the German government also commissioned the evaluation of these reforms to a number of research institutes (Jacobi and Kluve 2006).

Another contributing factor to the prevalence of evaluations of German interventions is the fact that the Institute for Employment Research in Germany (IAB) has recently made a 2% randomly drawn samples from the Integrated Employment Biographies (IEB) of the IAB available for research purposes. These contain observations on unemployment benefits, job search and

¹⁵ For the tables for the summary of findings the “Others” category is created to capture interventions that started in a period that overlaps with two of the other three categories. For example, findings from participants that started an intervention during 2003-2006 are put in the “Others” category.

¹⁶ Notice, however, that in order to be able to look at long-term employment outcomes – as most of the recent labour market literature does – a longer time is required between the end of the intervention implementation and its evaluation through counterfactual methods.

¹⁷ If one calculates the average number of years between the end of an intervention and the date of evaluation, one gets approximately 8.5 years. This means that for our sample of papers, 8.5 years passed, on average, before an intervention was evaluated. Please note that it is very likely that this number is biased upwards for two reasons. First, both published and working papers are included, which means that attention is not restricted to the effective publication date for all papers. Second, and most importantly, some authors look at short- and medium-term effects but others purposefully wait longer in order to estimate long-term effects. All these papers are pooled together and averaged, which is likely to further cause an upward bias.

participation in ALMPs combining four data sources.¹⁸ Out of the 23 papers with a German focus that were included in the analysis, 10 use the IEB dataset only and an additional 2 use it in combination with other data sources.

In the EU, **SE is also relatively well-represented**, with 5 entries, but the **newer Member States** are **severely under-represented**. There are 3 entries for PL, one for RO, one for SI and one for LV. It is unlikely that this is due to the fact that there have been no training interventions suitable for CIEs. Rather, there might be a lack of culture for appropriate data collection in these Member States. **Hence, there are significant knowledge gaps at the country level in the area of training interventions.**

¹⁸ There are two versions of the IEB samples: a weakly anonymous version, which was built in May 2008 and contains data from 1990 and 2008 and a scientific use file, which was built in May 2007 and it contains data starting with 1993.

By sub-intervention

Two main sub-categories were defined to distinguish between the different training interventions: **classroom/vocational training** and **on-the-job training** (within real or “practice firms”¹⁹).

This is the classification most often made in the literature (e.g. Martin & Grubb 2001). However, **within the classroom/vocational training** one further distinguishes between interventions with varying durations, as they are bound to differ in terms of the skills they are able to teach. Therefore separate categories for interventions that last 1) **less than 6 months**, 2) **between 6 and 12 months**, and 3) **more than one year** are constructed.

A residual category is also included, because some papers evaluate interventions that have multiple components, only one of which is training, and also because in some cases information on the duration of interventions is not clear or not specified.

It is worth mentioning that the planned duration of an intervention is not specified in all papers. In order to still be able to classify such papers according to intervention duration, the average or median duration of the interventions was recorded, which are always reported.²⁰ In addition, the distinction between different types of training (classroom/vocation and on-the-job training) is rarely made in earlier papers, again due to the fact that this distinction does not show up in the data, so the various types of training are then pooled together.

In the most recent papers, however, one finds a disaggregation by type of training, and duration of training seems to be of particular interest. Some papers even consider the specific duration of a training intervention as the treatment variable, and not the fact that it is a training intervention *per se* (e.g. Kluve et al., 2013).

Before summarising the available findings in the sub-intervention tables of available findings, note that the sum of the number of entries in each category does not add up to the number of entries in Table 2. This is because most papers evaluate more than one intervention, and these interventions might fall into one or more sub-intervention categories. Hence, these papers will show up in multiple cells in the disaggregated tables. This observation holds for the next two subsections as well (2.3.2 and 2.3.3).

¹⁹ These are firms “which simulate working in a specific field of profession” (Lechner, Miquel and Wunsch 2011: 747).

²⁰ There are 3 papers for which the average duration was used, and 10 papers for which median duration was used, out of a total of 13 papers. The former are marked with an asterisk (*) and the latter with two asterisks (**) in tables 3 to 5.

Table 3: Available findings on classroom/vocational training, duration less than or equal to 6 months

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Fitzenberger, Osikominu, Völter (2006)*	DE (W)	1986-1988; 1993-1995
		Cockx (2003)*	BE	1989-1993
		Hotz et al. (2006)	US	1989-1990
		Puhani (2002)	PL	1992-1996
		Lechner, Miquel and Wunsch (2007)	DE (E)	1993, 1994
		Lechner, Miquel and Wunsch (2011)	DE (W)	1993-1994
		Kluve, Lehmann and Schmidt (2008)	PL	1993-1995
		Sianesi (2001)	SE	1994
		Sianesi (2002)	SE	1994
		Sianesi (2008)	SE	1994
		Gerfin and Lechner (2002)	CH	1998
		Prey (2000)	CH	1998
		Biewen et al. (2012)	DE	2000-2002
		Fitzenberger et al. (2013)	DE	2000-2003
		Kluve et al. (2013)	DE	2000-2002
		Kopf (2009)	DE	2000
		Kluve et al. (2012)	DE (W)	2000, 2001, 2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Rinne, Uhlendorff and Zhao (2012)*	DE	2002, 2003
		Stephan and Pahnke (2011)	DE	2003
		Neubäumer (2010)	DE (W)	2003
		Dmitrijeva (2008)**	LV	2003-2006
	OECD	Hotz et al. (2006)	US	1989-1990
		Gerfin and Lechner (2002)	CH	1998
		Prey (2000)	CH	1998
Young unemployed	EU	Larsson (2003)**	SE	1992, 1993
		Hämäläinen and Tuomala (2007)**	FI	1998-1999
		Van Reenen (2004)	UK	1998
Disadvantaged young unemployed	EU			
	OECD	Perry and Maloney (2008)**	NZ	1993-1994
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU			
	OECD			
Low-skilled unemployed	EU	Rosholm and Skipper (2009)	DK	1994
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		30		

For papers marked with a * (**), median (average) duration was used when classifying by duration.

Source: Authors' summary based on literature review.

Classroom/vocational training, duration less than or equal to 6 months

The first thing to observe in Table 3 is that **the majority of papers evaluate interventions aimed at the unemployed (25)**, though there are some notable instances of the young unemployed (3) being targeted. There are **clear knowledge gaps in what concerns the elderly unemployed, the long-term unemployed, the employed, the inactive and the disabled** (with no entries).

In terms of year of intervention, **more than half of the papers in this table (18) evaluate interventions taking place before 2000**, 4 papers evaluate interventions occurring between 2000 and 2005, 2 papers between 2005 and 2010, 5 papers interventions that span the period before and after 2000, and one looks at the effect of an intervention taking place before and after 2005.

The **majority of interventions being evaluated come from DE (14)**, with SE and CH having 3, and 2 entries, respectively.

Classroom/vocational training, duration between 6 months and 1 year

In Table 4 one observes that **there are fewer papers evaluating this type of training as compared to the previous one**. All 17 papers that fall into this category are CIEs and virtually all (15) refer to interventions targeted at the **unemployed**. The two other categories, with one entry each for the UK and DE, regard the young unemployed and the long-term unemployed. There is a clear lack of substantial evidence on all target groups but the unemployed. Within the unemployed category, 12 papers evaluate German interventions, so in fact there is a lack of evidence for other countries for this target group. **There is a balance in terms of year of intervention**, in that 7 papers evaluate interventions from before 2000, and 10 after 2000 (3 between 2000 and 2005, 6 spanning the period before and after 2000 and one between 2005 and 2010).

Classroom/vocational training, duration greater than 1 year

The focus on the **unemployed** is present in this category as well, as Table 5 shows, with 7 out of 8 papers estimating treatment effects for the German unemployed and one looking at the German long-term unemployed. All papers evaluate older interventions, having taken place before 2006. The fact that most cells are empty signals the lack of evidence for all other target groups for a variety of countries.

On-the-job training

There are 12 entries for papers evaluating on-the-job training (Table 6). Out of these, **11 focus on the unemployed and one on the employed**. All the other cells, referring to the rest of the target groups, are empty, so there is definitely room for further research on the effect of interventions aimed at these groups. 8 papers refer to DE, 2 to SE, one to DK and one to FR. Therefore, in comparison with the previous intervention types, there is a slight variation in the countries covered.

The last residual table (Table 7) collects information about papers which cannot be classified according to the previous three sub-intervention categories. There are 17 such papers and, in contrast with the other categories, DE is not the country most analysed.

Table 4: Available findings on classroom/vocational training, duration between 6 months and 1 year

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Lechner (2000)**	DE (E)	1990-1993
		Fitzenberger and Speckesser (2007)**	DE	1993-1994
		Lechner, Miquel and Wunsch (2007)**	DE (E)	1993, 1994
		Fitzenberger and Völter (2007)	DE (E)	1993-1996
		Lechner, Miquel and Wunsch (2011)**	DE (W)	1993-1994
		Jespersen et al. (2008)**	DK	1994-2004
		Rodriguez-Planas and Benus (2010)	RO	1999
		Biewen et al. (2012)	DE	2000-2002
		Kluve et al. (2013)	DE	2000-2002
		Lechner and Wunsch (2009)	DE (E)	2000-2002
		Kluve et al. (2012)	DE (W)	2000, 2001, 2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Rinne, Schneider and Uhlendorff (2011)*	DE	2002
		Stephan and Pahnke (2011)	DE	2003
		McGuinness, O'Connell and Kelly (2011)	IE	2006-2008
Young unemployed	OECD			
	EU	Dorsett (2006)	UK	1998
Disadvantaged young unemployed	OECD			
	EU			
Elderly unemployed	OECD			
	EU			
Long-term unemployed	OECD	Bernhard S., Kruppe T. (2012)	DE	2005
	EU			
Low-skilled unemployed	OECD			
	EU			
Employed	OECD			
	EU			
Inactive	OECD			
	EU			
Disabled	OECD			
	EU			
Women	OECD			
	EU			
Untargeted	OECD			
	EU			
Total		17		

For papers marked with a * (**), median (average) duration was taken into consideration when classifying by duration.

Source: Authors' summary based on literature review.

Table 5: Available findings on classroom/vocational training, duration greater than 1 year

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Fitzenberger, Osikominu, Völter (2006)	DE (W)	1986-1988; 1993-1995
		Lechner, Miquel and Wunsch (2007)	DE (E)	1993, 1994
		Fitzenberger and Völter (2007)	DE (E)	1993-1996
		Lechner, Miquel and Wunsch (2011)	DE (W)	1993-1994
		Lechner and Wunsch (2009)	DE (E)	2000-2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Stephan and Pahnke (2011)	DE	2003
	OECD			
Young unemployed	EU			
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU	Bernhard S., Kruppe T. (2012)	DE	2005
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		8		

For papers marked with a * (**), median (average) duration was taken into consideration when classifying by duration.

Source: Authors' summary based on literature review.

Table 6: Available findings on on-the-job training

Target group		Reference	Intervention characteristics	
			<i>Country</i>	<i>Year of intervention</i>
Unemployed	EU	Fitzenberger and Völter (2007)	DE (E)	1993-1996
		Lechner, Miquel and Wunsch (2011)	DE (W)	1993-1994
		Jespersen et al. (2008)	DK	1994-2004
		Sianesi (2002)	SE	1994
		Sianesi (2008)	SE	1994
		Kopf (2009)	DE	2000
		Fitzenberger, Osikominu, Völter (2006)	DE (W)	1986-1988; 1993-1995
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Rinne, Schneider and Uhlendorff (2011)	DE	2002
		Stephan and Pahnke (2011)	DE	2003
		Wolff and Jozwiak (2007)	DE (W)	2005
	OECD			
Young unemployed	EU			
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU			
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU	Cheron et al. (2010)	FR	1998
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		12		

For papers marked with a * (**), *median (average)* duration was taken into consideration when classifying by duration.

Source: Authors' summary based on literature review.

Table 7: Available findings on other types of interventions

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Winter-Ebmer (2001)	AT	1987
		Bergemann, Fitzenberger and Speckesser (2009)	DE (E)	1990-1993; 1994-1999
		Kluge, Lehmann and Schmidt (2001)	PL	1993-1995
		Fredriksson and Johansson (2003)	SE	1993-1997
		Kopf (2009)	DE	2000
		Rinne, Schneider and Uhlendorff (2011)	DE	2002
		Rotar (2012)	SI	2002, 2003
	OECD	Hotz et al. (2006)	US	1989-1990
		Andersson et al. (2013)	US	1999-2005
		Heinrich et al. (2009)	US	2003-2005
Young unemployed	EU	Brodaty, Crepon and Fougere (2002)	FR	1986-1988 and 1995-1998
	OECD			
Disadvantaged young unemployed	EU	Pessoa et al. (2009)	FR	1996-1998
	OECD	Ehlert, Kluge and Schaffner (2012)	DE	2007-2009
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU			
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD	Andersson et al. (2013)	US	1999-2005
Inactive	EU	Heinrich et al. (2009)	US	2003-2005
	OECD			
Disabled	EU			
	OECD	Aakvik (2001)	NO	1989-1993
Women	EU			
	OECD			
Untargeted	EU			
	OECD	Fairlie et al. (2012)	US	2003-2005
Total		17		

For papers marked with a * (**), *median (average)* duration was taken into consideration when classifying by duration.
Source: Authors' summary based on literature review.

Summary of findings on training

After discussing the number of available findings per country and target group from papers from 2000 onwards, this section summarises the particular findings looking at the direction and significance of effects of interventions, focusing on papers from 2006 onwards.

Total

A total number of **102 findings** were identified from **38²¹ papers** included in the analysis. For papers evaluating more than one intervention, multiple findings are reported. These are summarised in Table 8.²²

The total of 102 excludes a number of findings that are classified as unclear for the following reason. Overall effects are reported whenever the disaggregated results had the same sign, in the sense that in case of papers which perform their analysis at a disaggregated level (e.g. for men and women separately, for men and women starting training at different points in time during their unemployment spell separately etc.), the aggregated results (the “big-picture”) is reported – i.e. results are aggregated if such aggregation makes sense. For example, if a training intervention has positive significant effects for each subcategory, then it was classified as an overall positive significant effect of the training.

However, for some of those papers that perform their analysis at a very disaggregated level, there were a few instances in which the effects of training vary for the different groups for which the analysis was conducted separately. For example, if the analysis focused on men and women separately, it could happen that the effect was positive for men but negative for women. One cannot report an overall effect in this case; hence they are discussed separately, in the next subsection. Also, for some of those papers that evaluate the occurrence of training related to the time point during unemployment spells, the effects also differ sometimes. These unclear findings are discussed at the end, so as to give an idea of the extent to which heterogeneity might matter.

Concerning the statistical significance of the effects of the interventions,²³ out of the 102 findings, 51 (50%) are positive and statistically significantly different from zero, 31 (30%) are not statistically different from zero and 20 (20%) are negative and statistically significantly different

²¹ As explained in Subsection 2.1.2, findings are summarised from evaluations dated 2006 and onwards. This reduces the number of papers from 53 to 38.

²² Three of these findings refer to male unemployed only, as the authors restrict their samples to this target group (Kluve et al. 2012 and Perry and Maloney 2008).

²³ Findings are defined as statistically significant if the probability that they are due to chance is low. If interventions’ results are statistically significantly different from zero and positive, the intervention is considered to positively affect the outcome variable.

from zero. This is in line with the previous literature in this area, indicating that **training** interventions **can have positive** but **often do not have significant effects**.

Method

Looking at the first rows of this table, some patterns that were already identified in the knowledge tables of available findings reemerge. As mentioned before, there is a preponderance of findings resulting from **propensity score matching** (79 findings). The second most used method is Difference-in-differences which accounts for merely 9 out of 102 findings.

Target groups

An overwhelming majority of findings relate to the **unemployed**, which was already identified as the target group most thoroughly evaluated in the tables of available findings. 88 out of the 102 findings refer to this target group, 46 out of which are positive significant, 25 insignificant and 17 negative significant.

Year of intervention

Most findings are related to interventions starting **before 2005** (68). There are 26 such findings and almost all of them (25) refer to interventions that start in a period that overlaps with the first two categories (before 2000 and 2000-2005). As stated before, there is a significantly lower number of findings related to more recent interventions.

Country coverage

As expected, most findings come from papers focusing on **DE** (pooling West and DE (E) together, there are 69 findings from DE). IE shows up with more findings than expected from the previous table, since the unique paper about training programmes from this country included in our review shows evaluations of different interventions (7 findings). SE, instead, shows up with fewer findings (2) since papers dated before 2005 were included in the tables of available findings, but not in the table of number of findings by direction and significance of effects.

Type of data used

An overwhelming majority of findings comes from **administrative data**²⁴ (80), but there are also some evaluations based on survey data (13) and on a few occasions specific surveys only for the intervention under study have been used (3).

Time of evaluation

As concerns the time of evaluation, in several papers, even when they have access to data covering a wide time span, the authors report results several months after the intervention has started due to the potential *lock-in* effects that may arise (see Subsection 2.1). Moreover, the fact that there are only a few entries in the short-term category does not necessarily mean that other papers do not evaluate these effects, but simply that they also report medium- and/or long-term effects; these cases are extracted for the reasons explained in Subsection 2.1.

Bearing these aspects in mind, most effects turn out to be **medium-term** (60), though a sizeable effort has been put towards finding out the long-term effects of these interventions (32).

One can conclude that training interventions often have **a positive effect** on employment outcomes; **sometimes no significant effect** can be identified.

By sub-intervention

As shown earlier, there is a great degree of heterogeneity in the findings: there is little variation in the target groups and countries covered, the methodologies used, and the type of data employed. As such, Table 8 contains for each type of intervention a very high number of dashes, which point precisely to those areas where more evidence is needed. However, based on the disaggregated tables, the following observations can be made:

- Most findings refer to short classroom/vocational training interventions (43 out of 102);
- For medium-length programs (between 6 months and 1 year), more findings are **insignificantly** than significantly different from zero: 8 as compared to 4 positive significant and 2 negative significant;
- The programs that most often reveal **positive effects** are **short classroom/vocational training** and **on-the-job training interventions**.

²⁴ These 80 findings come from 30 papers. Only 9 papers did not use administrative data, while 3 papers used a combination of administrative and survey data.

Table 8: Number of findings on training by direction and significance of effects

Characteristics	Estimated effect																							
	Total				Classroom/vocational training, duration ≤ 6 months				Classroom/vocational training, duration 6 months to 1 year				Classroom/vocational training, duration > 1 year				On-the-job training				Other intervention types			
	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-
Evaluation method																								
Regression	7	7	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-
PSM	79	41	24	14	34	17	10	7	13	4	8	1	8	5	-	3	14	10	3	1	10	5	3	2
DID	9	3	3	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8	3	2	3
RDD	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IV	3	1	-	2	1	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	1
Randomisation	3	-	3	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-
Country																								
DE	20	19	-	1	8	8	-	-	4	3	-	1	2	2	-	-	4	4	-	-	2	2	-	-
DE (E)	28	10	6	12	9	3	1	5	3	1	2	-	3	1	-	2	3	2	1	-	10	3	2	5
DE (W)	21	7	6	12	11	3	8	-	3	-	3	-	3	2	-	1	3	2	1	-	1	-	1	-
DK	5	1	3	1	2	-	1	1	1	-	1	-	-	-	-	-	2	1	1	-	-	-	-	-
FI	2	-	2	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FR	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-
IE	7	7	-	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LV	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NZ	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RO	2	-	2	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
SE	2	-	-	2	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
SI	3	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	1
UK	1	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
US	6	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	2	4	-
Data used																								
Administrative	80	44	23	13	40	22	12	6	12	4	6	2	8	5	-	3	13	9	3	1	7	4	2	1
Survey	13	6	2	5	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	11	4	2	5
Only for the evaluation	3	-	3	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	1	-	1	-

Characteristics	Estimated effect																							
	Total				Classroom/vocational training, duration ≤ 6 months				Classroom/vocational training, duration 6 months to 1 year				Classroom/vocational training, duration > 1 year				On-the-job training				Other intervention types			
	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-
Combination	6	2	3	1	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	4	2	2	-
Year of intervention																								
before 2000	36	12	15	9	10	3	5	2	7	1	5	1	3	3	-	-	4	1	2	1	12	4	3	5
2000-2005	32	24	7	1	11	8	3	-	3	3	-	-	2	2	-	-	8	8	-	-	8	3	4	1
2005-2010	8	8	-	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
Others	26	8	9	9	15	5	5	5	4	-	3	1	3	-	-	3	2	1	1	-	2	2	-	-
Time of evaluation																								
short-term	10	8	1	1	10	8	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
medium-term	60	26	18	16	23	9	9	5	9	2	5	2	4	1	-	3	7	7	-	-	17	7	4	6
long-term	32	18	12	2	10	6	3	1	5	2	3	-	4	4	-	-	7	3	3	1	6	3	3	-
Main target groups																								
Unemployed	88	46	25	17	38	23	9	6	12	3	8	1	7	4	-	3	13	9	3	1	18	7	5	6
Young unemployed	3	-	2	1	2	-	2	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Disadvantaged young unempl.	3	2	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-
Elderly unemployed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-term unemployed	2	2	-	-	-	-	-	-	1	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-
Low-skilled unemployed	2	-	1	1	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employed	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2	1	1	-
Inactive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disabled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Women	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Untargeted	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
Total	102	52	32	19	43	23	13	7	14	4	8	2	8	4	0	4	14	10	3	1	23	10	7	6

Source: Authors' summary based on literature review.

Heterogeneous effects

Heterogeneous effects by gender

As mentioned before, there were some instances where a high degree of heterogeneity of effects did not allow us to report an overall result. This was due to two different reasons: results were either reported separately **by gender** or by the timing of the treatment during the unemployment spell.

Table 9 shows the findings for the latter case. For this table only, a finding is defined as a pair $(a, b) = (\text{effects for men}, \text{effects for women})$. Five papers report treatment effects broken down by gender only, for a total of 24 findings.²⁵ Table 9 shows results that differ between genders. There are 8 such findings from three papers. This means that 16 out of the 24 findings show the same effects for men and women, thus they were included in the previous table (Table 8). The 8 findings suggest that when effects for men are significant (both negative and positive), they are insignificant for women (4 findings). When effects for men are insignificant - in 3 cases - they are significant for women. In one case only, the effect for men is negative while it is positive for women. Thus, no clear gender patterns emerge. Note, however, that this conclusion is based only on those three papers which report heterogeneous effects by gender.

Table 9: Heterogeneous effects on training by gender

Country	Estimated effect		Type of training/Time of evaluation
	Men	Women	
DE (E)	-	0	Vocational training, <=6 months/medium-term
DE (E)	0	+	Other/medium-term
DE (W)	+	0	Vocational training, <=6 months/medium-term
DE (W)	+	0	Vocational training, <=6 months/medium-term
DE	+	0	Vocational training, <=6 months/medium-term
DE	0	-	Vocational training, 6 months -1 year/medium-term
DE (E)	-	+	Vocational training, 6 months -1 year/long-term
DE (E)	0	+	Vocational training, >1 year/long-term

Source: Authors' summary based on literature review.

²⁵ It is important to note that for three out of the five papers (Kluve et al. 2013, Lechner, Miquel and Wunsch 2005 and Rodriguez-Planas and Benus 2010), the authors run their analyses on the full sample as well (on men and women both). This implies that the findings for the full sample only were included in the 114 findings discussed above. The effects identified on the full sample might differ from the combined individual results by gender (e.g. in Kluve et al. 2013, one of the findings is that the effect of short-term training is positive significant for men, insignificant for women and positive significant in the full sample).

Heterogeneous effects by timing of treatment and gender

A separate, but equally important trend in more recent papers, are evaluations of the timing of training interventions, taking into account **when these are placed during the unemployment spell**. Table 10 gives an overview of these findings. They refer exclusively to German interventions and they paint an ambiguous picture. Note that in the table of number of findings, when possible, the effects for each paper in Table 10 were aggregated and recorded as one overall finding. For example, the 4 findings in the first row were reported as “positive significant” in the table of number of findings. However, the third finding for DE (E) in Table 10 (the finding in the seventh row) was excluded because there is no obvious overall effect to be recorded (previously referred as *unclear findings*).²⁶ Table 10 shows that for treatments starting early in the unemployment spell, i.e. between months 0 to 6, there is generally a positive significant effect. This does not seem to hold for men starting in the first 3 months of unemployment (insignificant effect) and immigrant women. For treatments starting during months 7-12 of the unemployment spell, short-term interventions always yield positive significant results. Finally, for treatments starting during months 13-24, there is less evidence than for the previous time frames. Out of the three entries, one is positive significant for everyone, while the other two paint an ambiguous picture with regards to gender: positive significant for men and insignificant for women.

In the case of interventions that last between 6 months and 1 year, for treatments starting early, the majority of effects tend to be insignificant– there are 2 exceptions (out of 6 possible findings). When interventions start after the first 6 months but before a year has passed, the effects are generally positive significant. With respect to the treatments starting late in the unemployment spell, the same ambiguity as before emerges: 2 out of 3 results are positive significant and one is insignificant.

Long interventions, lasting more than 1 year, seem to yield positive significant results if begun early in the unemployment spell, but not always for women. For treatments starting slightly later, the results are not conclusive because there are only 2 findings, one of which is positive significant, and the other insignificant. When started late, long interventions are generally positive significant, but not necessarily for men.

On-the-job trainings yield insignificant effects in 2 out of the 3 cases for interventions starting early. They yield mostly insignificant results if started during months 7-12 or 13-24 of the unemployment spell, except for younger cohorts, for whom one observes positive effects.

²⁶ Note that the gender effects shown in Table 10 are not present in Table 9, since they cannot be disentangled from the first level of disaggregation – the timing of the treatment.

Table 10: Heterogeneous effects on training by timing of treatment and gender

Country	Estimated effect			Type of training/Time of evaluation	
	Timing of treatment during the unemployment spell				
	Months 0-6		Months 7-12	Months 13-24	
DE	+		+	+ (men) 0 (women)	Vocational training, <=6 months /medium-term
DE	Months 1-3	Months 4-6	+	n/a	Vocational training, <=6 months/medium-term
	0 (men)	+			
	+ (women)				
DE	+ (no immigrant women)		n/a	n/a	Vocational training, <=6 months/medium-term
DE	Months 1-3	Months 4-6	+	n/a	Vocational training, 6 months -1 year/medium-term
	0 (men)	0			
	+ (women)				
DE (E)	+		+	+	Vocational training, 6 months -1 year/long-term
DE (E)	0		0	0	Vocational training, 6 months -1 year/medium-term
DE (E)	+ (men)		0	0 (men)	Vocational training, >1 year /long-term
	0 (women)			+ (women)	
DE (E)	0		n/a (men)	n/a (men)	On-the-job training/long-term
			0 (women)	0 (women)	
DE (W)	+		+	+	Vocational training, <=6 months /long-term
DE (W)	0		+	+	Vocational training, 6 months -1 year/medium-term
DE (W)	+		+	+	Vocational training, >1 year/long-term
DE (W)	cohort '86-'87				On-the-job training /long-term
	+	0	0		
	cohort '93-'94				
	0	+	+		

Source: Authors' summary based on literature review.

2.2.2 Intervention area 2: Private sector employment incentives and public sector employment

Evaluating the gaps

Total

Method

34 papers were identified with 48 findings that measure the impact of *Private sector employment incentives and public sector employment* interventions. This broad category covers the following four interventions: 1) **employment subsidies**, 2) **work experience or temporary job**, 3) **job creation schemes** and 4) **start-up incentives**. All these measures correspond to subsidised work programs which can be directed either to employers or to jobseekers.

In line with the previous intervention area, the prevalent method of estimation for *Private sector employment incentives and public sector employment* interventions is **Propensity Score Matching**, followed by **Difference-in-differences**. The outcome variable most often used is the **probability of being in regular (unsubsidised) employment**. Overall, there are 48 entries for the 34 papers considered, which means, as highlighted before, that some papers evaluate interventions aimed at more than one target group.

Target Groups

Most CIE studies regard the target group **unemployed** (total of 18 entries out of which 15 EU CIEs and 3 OECD CIEs). A lot of CIEs have also been performed for interventions targeted to the **long term unemployed** (total of 9 entries from EU only) and the **young unemployed** (total of 8 entries, 7 from EU and one OECD). One observes a knowledge gap regarding CIE evaluation for the target group **employed** (total of 2 entries from EU only). Similar to before, even less evaluated than the interventions targeted at the employed are interventions aimed at **specific groups of the unemployed**, in particular: **disadvantaged young unemployed, inactive, disabled and women**. For each of these target groups, only one CIE for the EU is found.

Country coverage

With regards to the geographical areas where evaluation analyses have been performed, most CIE evidence on incentives-related interventions in the EU is based on interventions in **DE** (25 out of 48 entries). In some studies, Western and Eastern German data have been studied separately while in others that distinction has not been made. Additional countries of CIE implementation are **IT** (7 entries) and **SE** (3). On the other hand, wide knowledge gaps are

present in BG, PL, RO and the UK, each with one entry for the period 2000-2013. **Thus there is a regional gap in CIE-based evidence between Eastern and Western European countries.**

Year of intervention

Most entries (35) refer to interventions that took place **before 2005** (and a majority of these, 26, evaluate interventions taking place even before 2000). Only 2 studies were found for recent interventions (after 2005) and 11 studies were found for interventions conducted in overlapping time intervals, e.g., started before 2000 and continued after 2000 (6 CIE evaluations), or started in the period 2000-2005 and continued after 2005 (5 CIE evaluations). **There thus is a significant gap of CIEs for interventions on private sector employment incentives and public sector employment conducted after 2005.**

By sub-intervention

Similarly to Kluve (2010), interventions under *Private sector employment incentives and public sector employment* are classified as either **public sector employment**, **private sector incentives** or **private and/or public**.²⁷ *Public sector employment* includes wage subsidies, employment programmes and job creation schemes. The created jobs should not compete with regular jobs. *Private sector employment incentives* include wage subsidies. These could be either directly targeted to unemployed individuals (e.g. disadvantaged, long term unemployed or at risk of unemployment) or given as incentives to firms for hiring new workers. The firm-directed subsidies commonly cover some of firms' labour costs or tax expenses. Start-up/self-employment subsidies given to unemployed individuals to create new businesses are another type of intervention that falls under this category. Finally, a few studies (8 CIEs) cannot be placed in either of these categories, which is why the residual category of *private and/or public* was created.

Public sector employment

As shown in Table 12, 20 entries refer to *Public sector employment* interventions. The group of **unemployed** is the most evaluated, with 6 entries, but a significant amount of effort has been put towards evaluating interventions aimed at the **young unemployed**, **long-term unemployed** (4 entries each) and the **low-skilled unemployed** (3). There are clear knowledge gaps with respect to the **disadvantaged young unemployed**, the **employed**, the **inactive** and **women**, for which no entry was found. There is only one entry for the **disabled**, so more evidence is needed for this target group as well.

As expected, in terms of country coverage, most entries refer to interventions conducted in DE (16). All of the references for DE, except one²⁸, use datasets from the Federal Employment Agency (FAE). The majority of evaluated interventions took place before 2000 (13), one occurred between 2000 and 2005, 4 spanned the period before and after 2000 and 2 the period before and after 2005.

²⁷ The category "private and/or public" refers to: 1) subsidies or employment programs offered/organised by private or public institutions; 2) interventions aimed at public and private firms, such as public employment schemes and employment subsidies; 3) interventions that place participants in both the private and public sector.

²⁸ Stephan and Pahnke (2011) use data provided by the TrEffeR- database of the German Public Employment Service.

Private sector employment incentives

Table 13 shows 24 entries for *Private sector employment incentives* interventions. Again, the category with the most entries is that of the **unemployed**, with 11 entries. There are no entries for the **low-skilled unemployed** and the **disabled**.

There is a slight degree of heterogeneity in terms of geographical areas covered, and, in addition to DE (with 9 entries), IT is also well-represented (6 entries). A few other MS show up, each with one entry: BG, FI, FR and PL. There are more entries for newer interventions in this category than in the previous one.

Private and/or public

For this last category, half of entries refer to the **unemployed (4)** and there are three entries for DE and CH each.

Table 11: Available findings on private and public sector employment incentives

Target group		Reference	Intervention characteristics	
			Country	Year of Intervention
Unemployed	EU	Sianesi (2008)	SE	1994
		Paggiaro, Rettore and Trivellato (2005)	IT	1997 and 1998
		Hujer, Caliendo and Thomsen (2004)	DE	2000
		Reinowski and Schultz (2006)	DE	2000-2004
		Lechner and Wunsch (2009)	DE (E)	2000-2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Cipollone, Di Maria and Guelfi (2004)	IT	2000
		Krug, Dietz and Ullrich (2008)	DE	2002-2003
		Caliendo and Künn (2011)	DE	2003
		Stephan and Pahnke (2011)	DE	2003
		Baumgartner and Caliendo (2008)	DE (W)	2003
		Neubäumer (2010)	DE (W)	2003
		Wolff and Nivorozhkin (2008)	DE	2005
		Hohmeyer and Wolff (2010)	DE (E)	2005-2008
		Deidda et al. (2012)	IT	2006-2007
	OECD	Gerfin and Lechner (2002)	CH	1998
		Gerfin, Lechner and Steiger (2005)	CH	1998
		Crichton and Maré (2013)	NZ	2003-2007
Young unemployed	EU	Tattara and Valentini (2009)	IT	1986
		Larsson (2000)	SE	1992
		Paggiaro, Rettore and Trivellato (2005)	IT	1997 and 1998
		Dorsett (2006)	UK	1998
		Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2008b)	DE	2000
		Caliendo, Künn and Schmidl (2011)	DE	2002-2008
	OECD	Crichton and Maré (2013)	NZ	2003-2007
Disadvantaged young unemployed	EU	Roger and Zamora (2011)	FR	2002
	OECD			
Elderly unemployed	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2008b)	DE (E)	2000
	OECD	Crichton and Maré (2013)	NZ	2003-2007
Long-term unemployed	EU	Kluve, Lehmann and Schmidt (2008b)	PL	1992-1996
		Sianesi (2008)	SE	1994
		Rodriguez-Planas and Benus (2006)	RO	1999
		Caliendo, Hujer and Thomsen (2006)	DE	2000
		Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Hujer and Thomsen (2010)	DE	2000-2001
		Schünemann, Lechner and Wunsch (2013)	DE	2000-2002
		Caliendo, Hujer and Thomsen (2008b)	DE (W)	2000
	OECD	Mihaylov (2011)	BG	2005

Target group		Reference	Intervention characteristics	
			<i>Country</i>	<i>Year of Intervention</i>
Low-skilled unemployed	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2008b)	DE	2000
	OECD	Gerfin, Lechner and Steiger (2005)	CH	1998
		Autor and Houseman (2010)	US	1999-2003
Employed	EU	Cipollone, Di Maria and Guelfi (2004)	IT	2000
		Huttunen, Pirttilä and Uusitalo (2013)	FI	2006
	OECD			
Inactive	EU	Cipollone, Di Maria and Guelfi (2004)	IT	2000
	OECD			
Disabled	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
	OECD			
Women	EU	Caliendo and Künn (2012)	DE	2003
	OECD			
Untargeted	EU			
	OECD			
Total		48		

Source: Authors' summary based on literature review.

Table 12: Available findings on public sector employment

Target group		Reference	Intervention characteristics	
			Country	Year of Intervention
Unemployed	EU	Sianesi (2008)	SE	1994
		Reinowski and Schultz (2006)	DE	2000-2004
		Lechner and Wunsch (2009)	DE (E)	2000-2002
		Wunsch and Lechner (2008)	DE (W)	2000-2002
		Stephan and Pahnke (2011)	DE	2003
		Hohmeyer and Wolff (2010)	DE (E)	2005-2008
	OECD			
Young unemployed	EU	Dorsett (2006)	UK	1998
		Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2008b)	DE	2000
		Caliendo, Künn and Schmidl (2011)	DE	2002-2008
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen(2008b)	DE (E)	2000
	OECD			
Long-term unemployed	EU	Rodriguez-Planas and Benus (2006)	RO	1999
		Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2006)	DE	2000
		Caliendo, Hujer and Thomsen(2008b)	DE (W)	2000
	OECD			
Low-skilled unemployed	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
		Caliendo, Hujer and Thomsen (2008b)	DE	2000
	OECD	Autor and Houseman (2010)	US	1999-2003
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU	Caliendo, Hujer and Thomsen (2008a)	DE	2000
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		20		

Source: Authors' summary based on literature review.

Table 13: Available findings on private sector employment incentives

Target group		Reference	Intervention characteristics	
			Country	Year of Intervention
Unemployed	EU	Sianesi (2008)	SE	1994
		Paggiaro, Rettore and Trivellato (2005)	IT	1997 and 1998
		Reinowski and Schultz (2006)	DE	2000-2004
		Cipollone, Di Maria and Guelfi (2004)	IT	2000
		Krug, Dietz and Ullrich (2008)	DE	2002-2003
		Caliendo and Künn (2011)	DE	2003
		Baumgartner and Caliendo (2008)	DE (W)	2003
		Neubäumer (2010)	DE (W)	2003
		Wolff and Nivorozhkin (2008)	DE	2005
		Deidda et al. (2012)	IT	2006 -2007
	OECD	Crichton and Maré (2013)	NZ	2003-2007
Young unemployed	EU	Paggiaro, Rettore and Trivellato (2005)	IT	1997 and 1998
		Caliendo, Künn and Schmidl (2011)	DE	2002-2008
	OECD	Crichton and Maré (2013)	NZ	2003-2007
Disadvantaged young unemployed	EU	Roger and Zamora (2011)	FR	2002
	OECD			
Elderly unemployed	EU			
	OECD	Crichton and Maré (2013)	NZ	2003-2007
Long-term unemployed	EU	Kluve, Lehmann and Schmidt (2008)	PL	1992-1996
		Schünemann, Lechner and Wunsch (2013)	DE	2000-2002
		Mihaylov (2011)	BG	2005
		Sianesi (2008)	SE	1994
Low-skilled unemployed	OECD			
	EU			
Employed	EU	Cipollone, Di Maria and Guelfi (2004)	IT	2000
		Huttunen, Pirttilä and Uusitalo (2013)	FI	2006
	OECD			
Inactive	EU	Cipollone, Di Maria and Guelfi (2004)	IT	2000
	OECD			
Disabled	EU			
	OECD			
Women	EU	Caliendo and Künn (2012)	DE	2003
	OECD			
Untargeted	EU			
	OECD			
Total		24		

Source: Authors' summary based on literature review.

Table 14: Available findings on private/public sector

Target group		Reference	Intervention characteristics	
			<i>Country</i>	<i>Year of Intervention</i>
Unemployed	EU	Hujer, Caliendo and Thomsen (2004)	DE	2000
		Hohmeyer and Wolff (2010)	DE (E)	2005-2008
	OECD	Gerfin, Lechner and Steiger (2002)	CH	1998
		Gerfin and Lechner (2002)	CH	1998
Young unemployed	EU	Tattara G., Valentini M. (2009)	IT	1986
		Larsson (2000)	SE	1992
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU	Hujer and Thomsen (2010)	DE	2000-2001
	OECD			
Low-skilled unemployed	EU			
	OECD	Gerfin, Lechner and Steiger (2005)	CH	1998
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		8		

Source: Authors' summary based on literature review.

Summary of findings on private sector employment incentives and public sector employment

Total

In the following analysis, 49 findings were included from 26 references written from 2006 onwards. These are summarised in Table 15, which provides additional information about the effectiveness of the examined interventions on employment outcomes. As was the case in the previous subsection, the total of 49 excludes a number of findings classified as unclear for the same reasons as before. These are discussed separately at the end of the subsection.

The first thing to observe in Table 15 is that out of the 49 findings, 27 are positive significant, 13 are insignificant and 9 are negative significant. **The majority of the positive significant findings are driven by findings on private sector incentive interventions** (19 out of the 25 findings in that category are positive significant).

Method

The most used method in the CIE evaluations is **PSM** (43 out of total 49 findings), followed by DID (3 findings), IV (2 findings) and RDD (one finding).

Since PSM is by far the widely used method, the discussion is focused on the results obtained with this method. Out of the 43 PSM findings, 25 are positive significant and the remaining 18 are distributed equally in the other two categories. Again, this large number of positive significant findings is driven by findings on private sector incentives interventions (19 findings), while only 5 are given by public sector employment interventions. While the majority of findings on public sector employment interventions are either insignificant (7) or negative significant (8), this is hardly the case for private sector incentives (2 insignificant and one negative significant). This is largely in line with the literature produced so far, which has emphasised that job creation schemes and other types of interventions that create jobs in the public sector are mostly ineffective.

It is worth noting that when private sector incentives interventions are analysed with either DID or RDD, the identified effects are insignificant. The number of findings (3) is too small, however, to draw any relevant conclusions in this regard.

Target groups

With regards to the target groups, the **unemployed (24)**, the **young unemployed (9)** and the **long-term unemployed (7)** have the highest number of findings. The discussion is hence focused on these groups. For the **unemployed**, the effect of incentives-related intervention

tends to be positive. There are 15 positive significant findings, 4 insignificant and 5 negative significant, with the negative effect being driven entirely by interventions in the public sector. For the **young unemployed**, the overall evidence is less straightforward (5 positive, one insignificant, 3 negative) with negative effects only from public sector interventions. The evidence on **long term unemployed** is mixed, in that out of the 7 findings, 3 are positive and 3 are insignificant – the only negative significant finding from private sector incentive interventions refers to this group. As the tables of available findings outlines, no findings are identified for the inactive and disabled.

Country coverage

The analysis by country is limited by the available data and is mostly feasible for DE. Pooling East (E) and West (W) together, a total number of 29 findings was identified for DE – 18 positive, 7 insignificant and 4 negative. It is worth noting that interventions in the East are less likely to give positive results than interventions in the West (2 as opposed to 5 positive findings in the West). Breaking down the effects by private and public sector interventions helps to better read the results. The CIE evidence on public sector employment in DE remains ambiguous, since the 13 findings are almost equally spread across the three categories of significance.

One retrieves the positive trend of private sector employment incentives, with 13 out of 15 findings positive significant. One can thus conclude that private sector interventions in DE are very likely to be effective. The country with the second highest number of findings, SE, provides less straightforward evidence, with only one positive finding, and 4 distributed equally in the other two categories. However, the small number of findings does not allow us to say more in this respect.

Type of data used

The data used in the majority of CIE evaluations is **administrative** (36 findings out of 49) but a few evaluations are also based on a combination of administrative and survey data (either general or collected specifically for the evaluation).

Time of evaluation

Most findings come from “**medium term**” evaluations (30 out of total 49 findings) and slightly more than half are positive (16). A decent amount of effort has been put towards deriving long-term effects (15 findings) and most of them (9) point again to positive effects (driven, however, almost entirely by private sector interventions).

Heterogeneous effects

Heterogeneous effects by gender

As Table 11 makes clear, our search delivered only one paper that evaluates interventions targeted specifically at women. However, in many instances, as was the case for training interventions, some authors run also their analyses separately by gender, in order to identify heterogeneous effects. Out of the 7 papers that report separate findings by gender, in 2 of them no differential effect was found. Thus, as in Subsection 2.3.1, the findings from the 5 remaining papers are discussed.

Caliendo, Hujer and Thomsen (2008b) find that the effect of a job creation scheme (public sector employment intervention) on elderly women in DE (W) is positive significant, whereas for men it is insignificant in the same region. They also find that the same intervention proved effective for long-term unemployed women in DE (E), but not for long-term unemployed men. Hohmeyer and Wolff (2010) also identify a positive significant effect of similar public sector employment interventions in DE (W) on women but an insignificant one on men. However, in the case of another direct job creation intervention where participants were not restricted to public sector employment, men in DE (W) benefitted more than women, for whom no significant effect was found. The employment probability of men in DE (E) was lowered as a result of an intervention which paid one to two Euros per hour (in addition to the benefits they were receiving) worked in public sector jobs, whereas women enjoyed positive effects for the same treatment. In light of the largely negative findings on the effects of various job creation schemes, Caliendo, Hujer and Thomsen (2006) go further and explore their effects according to the sector in which these jobs are created. The effects are insignificant for most sectors, but for women in DE (E) working in Office and Services and Community Services, the effects are negative, as are the effects for East German men working in Construction and Industry jobs. Office and Services jobs prove effective only for men in DE (W). One can conclude that public sector employment interventions have a positive effect for women more often than for men.

Heterogeneous effects by timing of treatment

Two papers were identified which evaluate interventions based on the timing of the treatment within the unemployment spell. Hujer and Thomsen (2010) find negative effects for East Germans participating in a job creation scheme in the first 6 months of the unemployment spell, while for West Germans these effects stay largely insignificant unless the participants start the treatment in quarter 5 of the unemployment spell. In a similar vein, Caliendo, Künn and Schmidl (2011) find a negative effect of job creation schemes that start in the first three months of the unemployment spell, and positive effects are only found for East Germans starting the treatment during months 7-12.

Table 15: Number of findings on private and public sector employment incentives by direction and significance of effects

Characteristics	Estimated effect															
	<i>Total</i>				<i>Public sector employment</i>				<i>Private sector employment incentives</i>				<i>Public or private</i>			
	Tot.	1	0	-1	Tot.	1	0	-1	Tot.	1	0	-1	Tot.	1	0	-1
Evaluation method																
Regression	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PSM	43	25	9	9	20	5	7	8	22	19	2	1	1	1	-	-
DID	3	1	2	-	-	-	-	-	2	-	2	-	1	1	-	-
RDD	1		1	-	-	-	-	-	1	-	1	-	-	-	-	-
IV	2	1	1	-	2	1	1	-	-	-	-	-	-	-	-	-
Randomisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Main Countries																
BG	1	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-
DE	18	11	6	1	6	1	4	1	12	10	2	-	-	-	-	-
DE (E)	5	2	1	2	4	1	1	2	-	-	-	-	1	1	-	-
DE (W)	6	5	-	1	3	2	-	1	3	3	-	-	-	-	-	-
FI	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-
FR	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-
IT	2	2	-	-	-	-	-	-	1	1	-	-	1	1	-	-
NZ	3	3	-	-	-	-	-	-	3	3	-	-	-	-	-	-
PL	1	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-
RO	1	-	1		1	-	1	-	-	-	-	-	-	-	-	-
SE	5	1	2	2	3	-	1	2	2	1	1	-	-	-	-	-
UK	3	1	-	2	3	1	-	2	-	-	-	-	-	-	-	-
US	2	1	1	-	2	1	1	-	-	-	-	-	-	-	-	-
Data used																
Administrative	36	17	11	8	21	6	7	8	13	9	4		2	2	-	-
Survey	1	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-
Only for the evaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination	12	10	2	-	1	-	1	-	11	10	1	-	-	-	-	-
Year of intervention																
Before 2000	16	4	7	5	12	2	6	4	3	1	1	1	1	1	-	-
2000-2005	14	11	3	-	2	1	1	-	12	10	2	-	-	-	-	-
2005-2010	2	1	1	-	-	-	-	-	2	1	1	-	-	-	-	-
Others	17	11	2	4	8	3	1	4	8	7	1	-	1	1	-	-
Time of evaluation																
Short-term	4	2	1	1	-	-	-	-	3	1	1	1	1	1	-	-

Medium-term	30	16	9	5	16	5	6	5	13	10	3	-	1	1	-	-
Long-term	15	9	3	3	6	1	2	3	9	8	1	-	-	-	-	-
Main target groups																
Unemployed	24	15	4	5	10	3	2	5	13	11	2	-	1	1	-	-
Young unemployed	9	5	1	3	5	1	1	3	3	3	-	-	1	1	-	-
Disadvantaged young unempl.	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-
Elderly unemployed	2	1	1	-	1	-	1	-	1	1	-	-	-	-	-	-
Long-term unemployed	7	3	3	1	3	1	2	-	4	2	1	1	-	-	-	-
Low-skilled unemployed	3	1	2	-	3	1	2	-	-	-	-	-	-	-	-	-
Employed	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-
Inactive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disabled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Women	2	2	-	-	-	-	-	-	2	2	-	-	-	-	-	-
Untargeted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	49	27	13	9	22	6	8	8	25	19	5	1	2	2	0	0

Source: Authors' summary based on literature review.

2.2.3 Intervention area 3: Labour market services

Evaluating the gaps

Total

Method

The total number of papers which perform CIE analyses on the effects of labour market services interventions equals 15. As in the previous subsections, for papers containing analyses on different target groups, results for each of these groups (17 findings) have been taken into account.

The effectiveness of programs of labour market services, which offer assistance to job seekers, is evaluated through **the employment status of participants at the end of the intervention**. Again most evaluations are based on the analyses of employment probability.

Target groups

By looking at the first column of Table 16, out of the 17 interventions included in our analysis, 9 are aimed at the most general category of **unemployed**. This means that the eligibility criteria of these given interventions were defined simply on the basis of employment status, without taking into account specific characteristics of workers such as age or the duration of the unemployment spell.

In addition to the most targeted group of unemployed, the group of **young unemployed** is the one with a relatively high number of targeted interventions, 5 out of the 17. Instead, among the evaluated interventions the groups of long-term unemployed and elderly unemployed are the ones with the lowest numbers of targeted interventions (one and 2 respectively).

Among the 4 categories identified by employment status, the groups of disadvantaged young unemployed, low-skilled unemployed, employed and inactive are never present among the evaluated interventions. Disabled and women are not present either. **There is thus a knowledge gap for most of the target groups.**

Year of intervention

Out of the 17 selected interventions, only 4 started exactly before 2000 (2000 included). For 3 out of the 17 interventions the starting date falls in a wider range which contains the year 2000. Instead, out of the 17, 4 started in the time interval between 2000 and 2005 (2005 included). Only one started in the time interval 2005 – 2006 and, finally, 5 out of the 18 started after 2005.

By looking at the distribution of the starting dates of these interventions, it is clear that among the selected interventions **no particular time interval is predominant**, and that there is a lack of evidence for recent years (after 2008).

Country coverage

Table 16 contains additional information about countries where the evaluated interventions have been carried out. There are no interventions from the OECD area. All interventions have been carried out in EU countries. Among these, the countries with the highest numbers of evaluated interventions are **DK** and **UK**. In both of them 3 out of the 17 interventions have been implemented. FR appears twice in the table since 2 out of the 17 interventions have been implemented there. PT and SE also appear twice in the table. In these cases the quoted papers refer to a single intervention but have been recorded more than once because the intervention is targeted to several different groups. Finally, the other EU countries where one out of the 17 analysed interventions has been carried out are AT, DE, IE, NL and RO.

It is remarkable that RO is the only Eastern European country with CIE evidence. **This signals a knowledge gap for CIE evaluations for the Eastern area of Europe.** On the other hand, **the distribution of interventions among Western European countries is rather uniform**, since there is no concentration of interventions in any one particular country, contrary to what is found for the other two interventions reviewed in Subsections 2.3.1 and 2.3.2. Nevertheless, one notes a relative knowledge gap in certain EU Western countries, such as BE, GR, ES, IT, CY, LU, MT, FI, which are not present in the list of countries with evaluated interventions.

Table 16: Available findings on labour market services

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Lechner and Wiehler (2013)	AT	1990 - 2005
		Rodríguez -Planas and Jacob (2010)	RO	1999
		Hägglund (2009)	SE	2004
		Blasco and Pertold-Gebicka (2013)	DK	2005
		Gautier et al. (2012)	DK	2005 - 2006
		Vikström, Rosholm and Svarer (2013)	DK	2005
		Huber, Lechner, Wunsch and Walter (2009)	DE	2006 - 2007
		McGuinness, O'Connell and Kelly (2013)	IE	2006
		Kastoryano and Van der Klaauw (2011)	NL	2006 - 2008
	OECD			
Young unemployed	EU	Centeno, Centeno and Novo (2009)	PT	1998, 1999, 2000, 2001
		Blundell et al. (2004)	UK	1998
		Van Reenen (2003)	UK	1999
		Hägglund (2009)	SE	2004
		Crépon et al. (2013)	FR	2007 - 2008
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU	Centeno, Centeno and Novo (2009)	PT	1998, 1999, 2000, 2001
	OECD			
Long-term unemployed	EU	Dolton and O'Neill (2002)	UK	1989
		Behaghel, Crépon and Gurgand (2012)	FR	2007 - 2008
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		17		

Source: Authors' summary based on literature review.

By sub-intervention

Labour market services include a wide range of forms of assistance to job seekers, such as career management, job board, job search assistance, career coaching, job referral and placement. In this report, according to the categories present in the literature, labour market services interventions have been divided into the following sub-interventions:

- job-search assistance
- counselling and monitoring
- job placement and relocation assistance²⁹.

Job-search assistance

The sub-intervention related to **job-search assistance services** is the most analysed one: out of the 17 interventions present in our search, 11 describe these programs³⁰.

The analyses related to job-search assistance services cover several of the target groups considered here: **unemployed, young unemployed, elderly unemployed, long-term unemployed**. The category of unemployed receives the highest number of interventions: 6 interventions out of 11. 3 programs are targeted to young unemployed, and only one is targeted to elderly unemployed and long-term unemployed, respectively. Despite the high number of papers evaluating this sub-intervention, one can therefore conclude that there is some evidence for particular sub-groups of unemployed such as the elderly unemployed and the long-term unemployed, and a lack of evidence for the low-skilled, inactive and disabled.

As stated previously, all job-search assistance programs have been carried out in EU countries. Among those, **DK, UK and PT** are the only countries with more than one evaluated intervention (2 out of 11). The 2 interventions implemented in PT have been analysed in the same paper, Centeno et al. (2009). Finally, the other EU countries where evaluations of job-search interventions were carried out are AT, DE, IE, and NL, each with one evaluation. The same considerations as for the general intervention apply for the **job-search** assistance sub-intervention too: there is **no concentration** of interventions in any one particular country and the distribution of interventions among **Western** European countries is rather **uniform**, while there is a **lack of evidence** for interventions carried out in the **Eastern European countries**.

²⁹ For labor market services, it has been possible to identify exclusive categories of sub-interventions. Therefore each analysed intervention has been reported in correspondence to one category and the sum of references for three sub-interventions equals the total of references for the main intervention.

³⁰ Since Centeno et al. (2009) analyse an intervention which has been targeted to two different groups, this paper is reported twice in Table 17. All the other entries refer to 9 different papers.

Table 17: Available findings on job-search assistance

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Lechner and Wiehler (2013)	AT	1990 - 2005
		Gautier et al. (2012)	DK	2005 - 2006
		Vikström, Rosholm and Svarer (2013)	DK	2005
		Huber, Lechner, Wunsch and Walter (2009)	DE	2006 - 2007
		McGuinness, O'Connell and Kelly (2013)	IE	2006
		Kastoryano and Van der Klaauw (2011)	NL	2006 - 2008
	OECD			
Young unemployed	EU	Centeno, Centeno and Novo (2009)	PT	1998, 1999, 2000, 2001
		Blundell et al. (2004)	UK	1998
		Van Reenen (2003)	UK	1999
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU	Centeno, Centeno and Novo (2009)	PT	1998, 1999, 2000, 2001
	OECD			
Long-term unemployed	EU	Behaghel, Crépon and Gurgand (2012)	FR	2007 - 2008
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		11		

Source: Authors' summary based on literature review.

Counselling and monitoring

Only 2 out of the 17 interventions refer to **counselling and monitoring activation programs**. While the first program addresses the broader group of unemployed, the second one is targeted only to job seekers who experienced long-term spells of unemployment. The counselling and monitoring activation program analysed by Blasco and Pertold-Gebicka (2013) was carried out in 2005 in DK, while the program studied Dolton and O'Neill (2002) took place in the UK in 1989. Given the lack of evaluations for this particular sub-intervention, it is not possible to draw any conclusions about the evidence present in literature. There is a **knowledge gap** about counselling and monitoring interventions with regards to **target groups, year** and **country** coverage.

Table 18: Available findings on counselling and monitoring

Target group		Reference	Intervention characteristics	
			<i>Country</i>	<i>Year of intervention</i>
Unemployed	EU	Blasco and Pertold-Gebicka (2013)	DK	2005
	OECD			
Young unemployed	EU			
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU	Dolton and O'Neill (2002)	UK	1989
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		2		

Source: Authors' summary based on literature review.

Job placement and relocation assistance

Only 5 out of the 17 interventions describe **job placement and relocation assistance** interventions. These analyses are reported in 3 papers: Rodríguez-Planas and Jacob (2010), Crépon et al. (2013) and Hägglund (2009). The latter appears twice in Table 19 since it studies the effects of three different interventions targeted to two different groups of job seekers: unemployed and young unemployed. Rodríguez -Planas and Jacob (2010) analyse the effects of a job placement intervention targeted to the unemployed in general, while Crépon et al. (2013) focus on the group of young unemployed only. These interventions cover the whole interval under analysis: 1999, 2004, 2007-2008, and provide evidence for three countries, FR, RO and SE. As for the counselling and monitoring services, given the low number of performed analyses, one can identify a **knowledge gap** for this kind of sub-intervention. Additional evaluations would be required for every kind of **target group**, **time interval** and **country** of intervention.

Table 19: Available findings on job placement and relocation assistance

Target group		Reference	Intervention characteristics	
			Country	Year of intervention
Unemployed	EU	Rodríguez-Planas and Jacob (2010)	RO	1999
		Hägglund (2009)	SE	2004
	OECD			
Young unemployed	EU	Hägglund (2009)	SE	2004
		Crépon et al. (2013)	FR	2007 - 2008
	OECD			
Disadvantaged young unemployed	EU			
	OECD			
Elderly unemployed	EU			
	OECD			
Long-term unemployed	EU			
	OECD			
Low-skilled unemployed	EU			
	OECD			
Employed	EU			
	OECD			
Inactive	EU			
	OECD			
Disabled	EU			
	OECD			
Women	EU			
	OECD			
Untargeted	EU			
	OECD			
Total		4		

Source: Authors' summary based on literature review.

Summary of findings on labour market services

Total

From the 12 papers (published from 2006 onwards) analysed, 22 findings were identified. As in the previous two subsections, for some papers multiple findings are reported.

By looking at the total values displayed in Table 20, one can notice that the 22 findings are: 10 positive significant, 9 insignificant and 3 negative significant. Therefore among interventions which show significant effects, 77% percentage had positive effects on the outcome of interest. The preponderance of positive significant estimated effects of interventions allows us to conclude that **most of the activation labour market interventions analysed here had positive effects on the probability to exit unemployment.**

Method

Propensity score matching and **randomisation** were the most frequently used methodologies, in 9 and 8 out of the 22 evaluations, respectively. The Difference-in-differences methodology has been implemented in 4 evaluations while only one analysis is based on regression discontinuity design. The distribution of evaluations among the different methodologies underlines, as for the previous intervention areas (training and public and private sector employment incentives), a wider use of propensity score matching.

Target group

As previously highlighted by the information contained in Table 16, the general category of **unemployed** has been the subject of the highest number of evaluated interventions. The estimated effects for this group show a predominance of positive or not significant results (7 positive significant effects, 2 negative significant and 6 insignificant). The group of **young unemployed** is the second most frequently evaluated. In the 5 analysed cases, the labour market services for this category of job seekers produce positive significant (one out of the 5 interventions), negative significant (1) and insignificant estimated effects (3). Analyses among the remaining groups of elderly unemployed and long-term unemployed are rather lacking, since there is one evaluation for each of these categories. For both target groups the evaluated interventions produce positive significant results.

Year of intervention

The distribution of analyses among the different time intervals shows a clear **predominance of more recent** interventions. Even if this pattern was not clear before, looking at the findings per paper for papers from 2006 (as opposed to the number of papers from 2000) there is a higher number of findings reported in the more recent papers. Among these, most (6 out of the 11 interventions taking place between 2005 and 2010) are not significant. Results of the interventions taking place between 2000 and 2005 (6) are equally distributed between positive and negative. The residual category “Others” contains interventions which take place across the previous intervals. Among these most (3 out of 4) show positive significant results.

Country coverage

With regard to the geographical areas where these kinds of analyses are concentrated, one notices the absence of OECD countries and observes how the positive and negative effects of labour market services are distributed among EU countries. The only countries where the estimated effects are not positive significant are IE and NL. In the former, the evaluated interventions show negative significant effects while the two programs from the latter produce both insignificant and negative significant effects. DK is the only country where more than one intervention has been evaluated and where all interventions show homogeneous results. All 3 interventions produce in fact positive effects. By contrast, in other countries such as DE, FR, PT and SE, where more than one intervention has been evaluated, it is not possible to assess the predominance of some particular sign of the effect; in fact, evidence is found of positive, negative and insignificant effects.

Type of data used

Table 20 shows additional information on the data sources which have been used to implement econometric analyses. 8 out of the 22 evaluations are based on administrative data, while 14 use a combination of **administrative** and **survey** data.

Time of evaluation

The time between the end of the program and the evaluation is not reported in 2 papers, and is therefore missing for 3 interventions. Out of 19 interventions with available time of evaluation, for 9 of them the analysis of effects has been performed in the short-run, while 8 have been evaluated in medium-run. Since for only 2 interventions the effects have been evaluated more than 3 years after completion, **there appears to be a knowledge gap of long-run analyses.**

Heterogeneous effects

Only two papers describe to what extent the dynamics of the treatment effects may differ by gender. Although there are no clear patterns that stand out for both regions, results from the job search assistance intervention in DK analysed by Vikstrom et al. (2013) seem to point out that women find jobs faster than men.

Table 20: Number of findings on labour market services by direction and significance of effects

Characteristics	Estimated effect															
	<i>Total</i>				<i>Job-search assistance</i>				<i>Counselling and monitoring</i>				<i>Job placement, relocation assistance</i>			
	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-
Evaluation method																
Regression	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PSM	9	4	4	1	8	3	4	1	-	-	-	-	1	1	-	-
DID	4	3	-	1	3	2	-	1	1	1	-	-	-	-	-	-
RDD	1	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-
IV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Randomisation	8	3	5	-	2	2	-	-	-	-	-	-	6	1	5	-
Main Countries																
AT	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-
DE	5	2	3	-	5	2	3	-	-	-	-	-	-	-	-	-
DK	3	3	-	-	2	2	-	-	1	1	-	-	-	-	-	-
FR	3	1	2	-	1	1	-	-	-	-	-	-	2	-	2	-
IE	1	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-
NL	2	-	1	1	2	-	1	1	-	-	-	-	-	-	-	-
PT	2	1	-	1	2	1	-	1	-	-	-	-	-	-	-	-
RO	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-
SE	4	1	3	-	-	-	-	-	-	-	-	-	4	1	3	-
Data used																
Administrative	8	5	1	2	7	4	1	2	1	1	-	-	-	-	-	-
Survey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Only for the evaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Combination	14	5	8	1	7	3	3	1	-	-	-	-	7	2	5	-
Year of intervention																
before 2000	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-
2000-2005	6	3	3	-	1	1	-	-	1	1	-	-	4	1	3	-
2005-2010	11	3	6	2	9	3	4	2	-	-	-	-	2	-	2	-
Others	4	3	-	1	4	3	-	1	-	-	-	-	-	-	-	-
Time of evaluation																
short-term	9	5	3	1	8	4	3	1	1	1	-	-	-	-	-	-
medium-term	8	3	5	-	1	1	-	-	-	-	-	-	7	2	5	-
long-term	2	1	-	1	2	1	-	1	-	-	-	-	-	-	-	-
Main target groups																
Unemployed	15	7	6	2	11	5	4	2	1	1	-	-	3	1	2	-

Characteristics	Estimated effect															
	<i>Total</i>				<i>Job-search assistance</i>				<i>Counselling and monitoring</i>				<i>Job placement, relocation assistance</i>			
	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-	Tot.	+	0	-
Young unemployed	5	1	3	1	1	-	-	1	-	-	-	-	4	1	3	-
Disadvantaged young unempl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elderly unemployed	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Long-term unemployed	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Low-skilled unemployed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inactive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disabled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Women	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Untargeted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	22	10	9	3	14	7	4	3	1	1	0	0	7	2	5	0

Source: Authors' summary based on literature review.

2.2.4 Overall assessment of gaps

In this subsection the findings highlighted in the previous three subsections are summarized for the three different areas of intervention: *Training*, *Private sector employment incentives and public sector employment*, and *Labour market services*.

First of all, *Training* represents the category for which it is possible to find the largest amount of evidence in the academic literature. Among the 102 papers on impact evaluation from 2000 onwards, about half are in fact related to *Training* programmes (53), while 34 and only 15 are about *Private sector employment incentives and public sector employment*, and *Labour market services* interventions respectively. Note that, despite the high number, the evaluations for the *Training* intervention area do not offer much evidence in terms of country coverage, since almost half of them (23 out of 53) deal with interventions conducted in DE.

Method

For all areas of intervention the distribution of evaluations among the different CIE methodologies underlines a larger use of propensity score matching. Although less frequently, also Difference-in-differences (DID) and randomisation methodologies have been implemented to carry out impact evaluations. Therefore there is an existence of a knowledge gap related to evaluations performed through Regression Discontinuity Design (RDD) and Instrumental variable (IV) methods regardless of the intervention area.

The effectiveness of labour market programs is generally evaluated through the employment status of participants at the end of the intervention, therefore the outcome variable most widely used in all categories of interventions is the employment probability.

Target groups

For every area of ALMP, the interventions analysed in most papers are aimed at the most general category of unemployed.

Some evidence can be found also for interventions targeted at the groups of young unemployed and long-term unemployed.

Not much is known about disadvantaged young unemployed, elderly unemployed, low-skilled unemployed, employed, inactive, disabled and women, due to the small number of interventions addressed to these groups.

Year of intervention

For all intervention areas one can observe a significant gap of CIEs for interventions conducted after 2005. The lack of evidence on recent interventions can be due to the time required for publishing results. This lag between the year of intervention and the publication date delays the possibility of informing policy makers about the effectiveness of interventions.

Country coverage

For both *Training* and *Private sector employment incentives and public sector employment* one can find a clear predominance of interventions conducted in DE. For *Labour market services* instead there is no concentration of interventions in any one particular country. On the other hand one can note a regional gap in CIE-based evidence between Eastern and Western Europe for all areas of interventions, since some significant evidence can be found for DE, SE, DK, UK, FR and PT but the only Eastern European countries where CIEs have been conducted are PL, RO, EE, SI, BG and LV, often with only one paper per country.

Table 21 and Figure 1: Number of training interventions by EU country and target group

Training	BE	BG	CZ	DK	DE	EE	IE	GR	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
Unemployed	1			1	21		1							1						1	3		1	1			4	
Young unemployed										1																1	1	2
Disadvantaged young unemployed					1					1																		
Elderly unemployed																												
Long-term unemployed					1																							
Low-skilled unemployed				1																								
Employed										1																		
Inactive																												
Disabled																												
Women																												

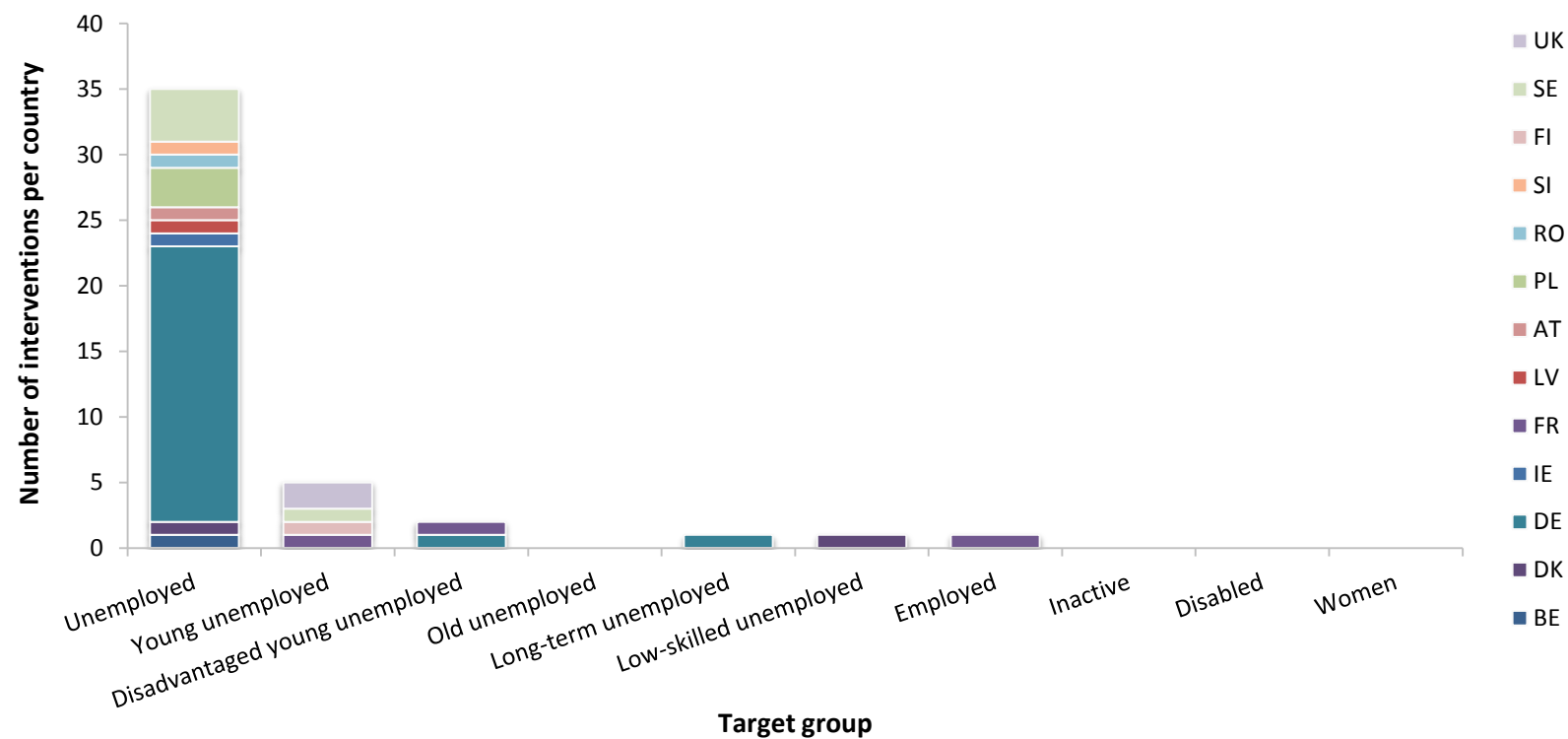


Table 22 and Figure 2: Number of private and public sector employment incentives interventions by EU country and target group

Incentives	BE	BG	CZ	DK	DE	EE	IE	GR	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
Unemployed					11							3															1	
Young unemployed					3							2															1	1
Disadvantaged young unemployed									1																			
Elderly unemployed					2																1		1					
Long-term unemployed		1			5																1		1				1	
Low-skilled unemployed					2																							
Employed																									1			
Inactive												1																
Disabled					1							1																
Women					1																							

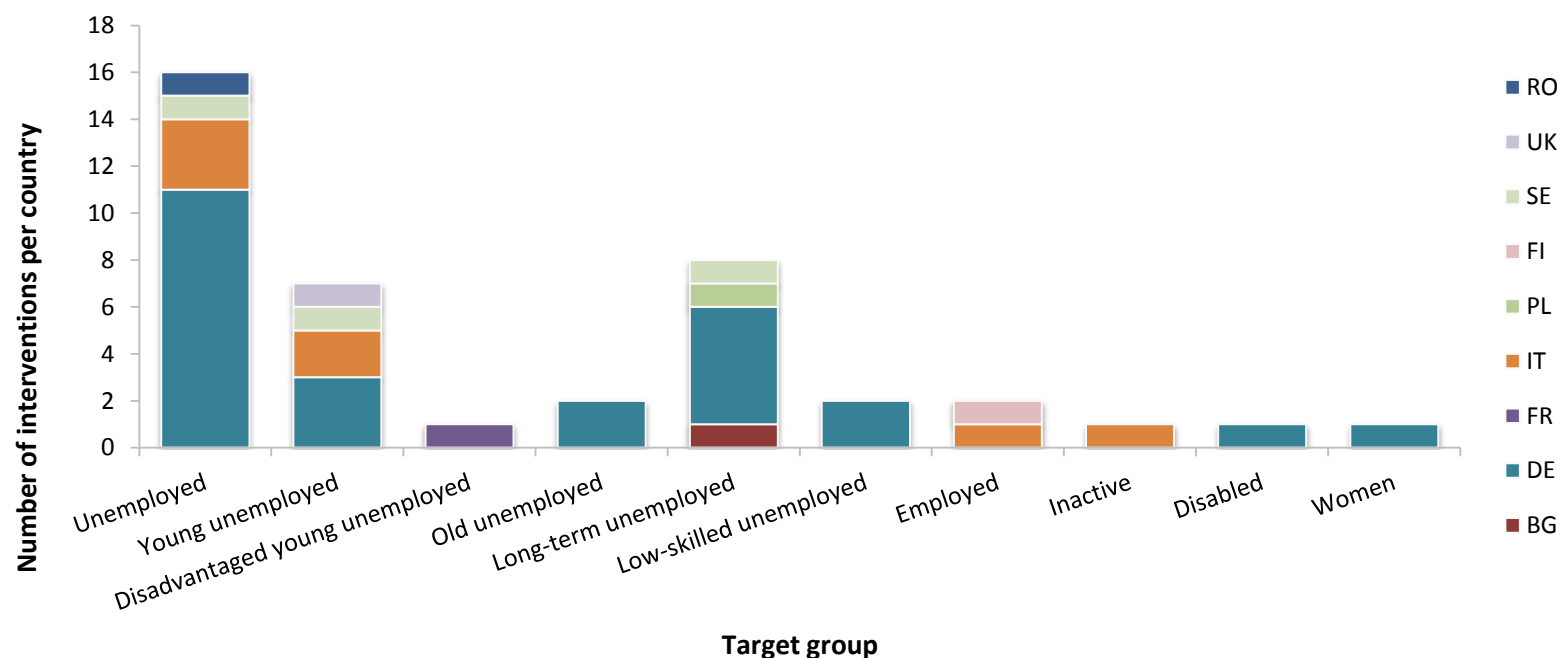


Table 23 and Figure 3: Number of labour market services interventions by EU country and target group

Labour market services	BE	BG	CZ	DK	DE	EE	IE	GR	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
Unemployed				3	1		1												1	1			1				1	
Young unemployed										1												1					1	2
Disadvantaged young unemployed																												
Elderly unemployed																						1						
Long-term unemployed										1																		1
Low-skilled unemployed																												
Employed																												
Inactive																												
Disabled																												
Women																												

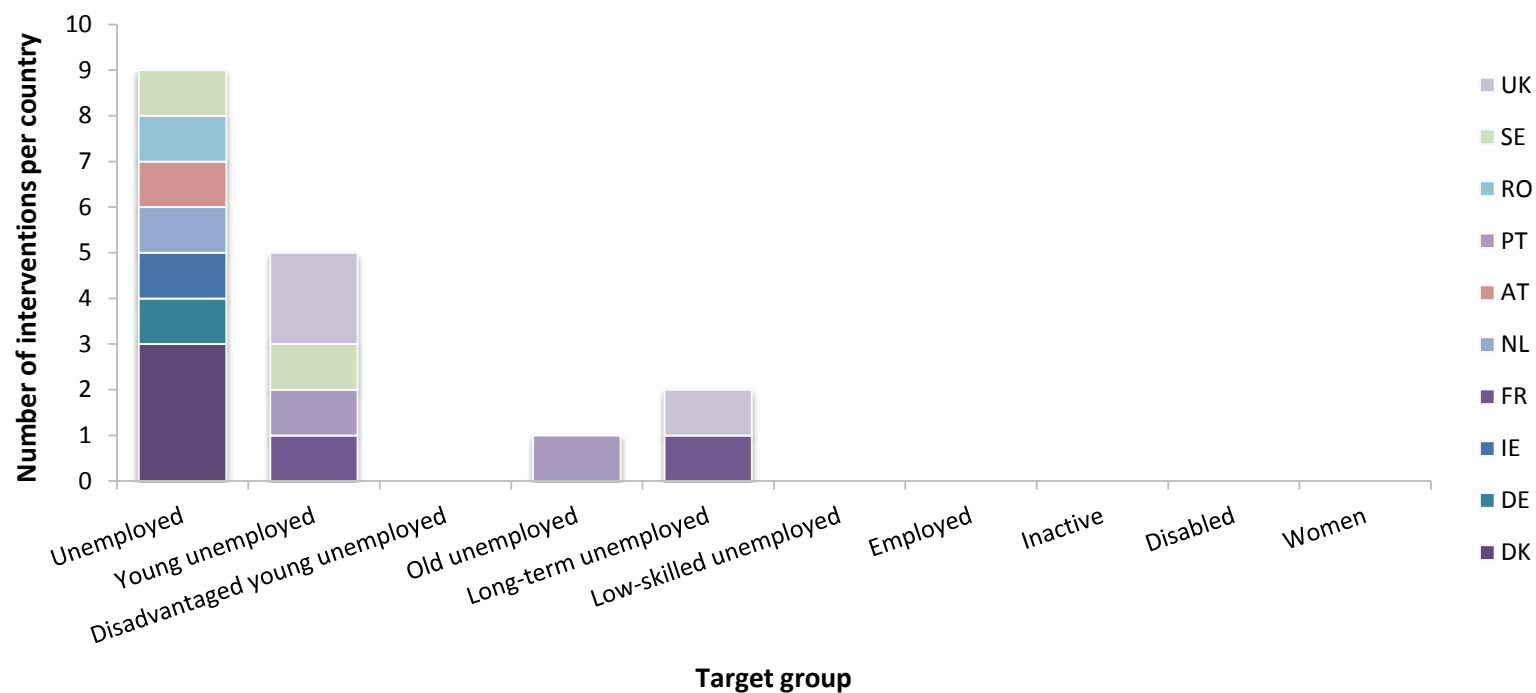


Table 24: Summary of knowledge gaps by EU country and target group

Target group	Intervention area					
	Training		Employment Incentives		Labour Market Services	
	MS implementing CIEs*	MS-level gaps**	MS implementing CIEs	MS-level gaps	MS implementing CIEs	MS-level gaps
Unemployed	AT(1), BE (1) DE(21), DK(1), IE(1), LV(1), PL(3), RO(1), SE(4), SI(1)	18	DE(11), IT(3), SE(1)	25	AT(1), DE(1), DK(3), IE(1), NL(1), RO(1), SE(1)	21
Young unemployed	FR(1), SE(1), UK(2)	25	DE(3), IT(2), SE(1), UK(1)	24	FR(1), PT(1), SE(1), UK(2)	24
Disadvantaged young unempl.	DE(1), FR(1)	26	FR(1)	27	-	28
Elderly unemployed	-	28	DE (2)	26	PT(1)	27
Long-term unemployed	DE(1)s	27	BG(1), DE(5), PL(1), RO(1), SE(1)	23	FR(1), UK(1)	26
Low-skilled unemployed	DK(1)	27	DE(2)	27	-	28
Employed	FR(1)	27	FI(1), IT(1)	26	-	28
Inactive	-	27	IT(1)	27	-	28
Disabled	-	27	DE(1)	27	-	28
Women	-	28	DE(1)	27	-	28

* Country for which there is CIEs evidence (number of interventions).

** Number of country-level knowledge gaps (i.e. number of countries not implementing CIEs).

Appendix of Chapter 2: Search procedure

The search for academic articles was performed in the three databases:

- 1) SCOPUS;
- 2) REPEC Ideas;
- 3) SSRN.

Due to the high number of papers that the keyword search produced, the results were further filtered by title so as to ensure the relevance of the papers resulted from the search. The resulting list was scrutinized and papers were eliminated based on their abstract (this includes papers that evaluate the impact of interventions at the macroeconomic level, or papers that evaluate types of programs that are not classified as active labour market policies). A similar procedure was applied to all databases.

According to search criteria and filters specific for each database, the search was performed for each category of intervention by the following keywords:

1) SCOPUS

- *Training*

TITLE-ABS-KEY(("training") AND ("labour market" OR "labor market" OR "job") AND ("evaluation" OR "impact" OR "data" OR "intervention" OR "program")) AND PUBYEAR aft 1999 AND LANGUAGE(english) AND SUBJAREA(econ)

- *Public and private sector employment incentives*

TITLE-ABS-KEY(("internship" OR "employment subsid*" OR "job* creation") AND ("labour market" OR "labor market" OR "job") AND ("evaluation" OR "impact" OR "data" OR "intervention" OR "program")) AND PUBYEAR AFT 1999 AND LANGUAGE(english) AND SUBJAREA(econ)

TITLE-ABS-KEY(("start-up" OR "self-employ*") AND ("subsid*" OR "incentive*" OR "labour market" OR "labor market" OR "job") AND ("evaluation" OR "impact" OR "data" OR "intervention" OR "program")) AND PUBYEAR > 1999 AND LANGUAGE(english) AND SUBJAREA(econ)

- *Labour market services*

TITLE-ABS-KEY(("job search" or "advice" OR "guidance" OR "counselling" OR "counseling" OR "coaching" or "assistance") AND ("labour market" OR "labor market" OR "job") AND ("evaluation" OR "impact" OR "data" OR "intervention" OR "program")) AND PUBYEAR AFT 1999 AND LANGUAGE(english) AND SUBJAREA(econ)

2) REPEC Ideas

- *Training*

Search for (training) + ("labor market" | "labour market" | program | intervention | policy | ALMP) + (evaluation | data | impact | effect | treatment)

- *Public and private sector employment incentives*

Search for ("internship" | "subsidy" | "subsidies" | "job creation") + ("labour" | "labor" | "job") + ("evaluation" | "impact" | "data" | "intervention" | "program")

Search for ("start-up" | "self-employment" | "self-employed" | "job creation") + ("subsidy" | "subsidies" | "grant" | "grants" | "incentive" | "incentives" | "labour market" | "labor market" | "job") AND ("evaluation" | "impact" | "data" | "intervention" | "program" | "programme")

- *Labour market services*

Search for ("job" | "search" | "assistance" | sanctions | advice | guidance) + ("labour market" | "labor market" | "job") + ("evaluation" | "impact" | "data" | "intervention" | "program")

3) SSRN

- *Training*

Search for Training + evaluation

- *Public and private sector employment incentives*

Search for ALMP + DATA; Internship +DATA; Employment subsidy + DATA; Wage subsidy + DATA; Job creation + DATA + evaluation; Start-up + evaluation; Self-employment + evaluation; Entrepreneur + evaluation; Entrepreneurship + evaluation

- *Labour market services*

Search for Job search assistance

3 Identification of gaps in the ESF Expert Evaluation database

This chapter focuses on the information provided by the **ESF Expert Evaluation Network**. Established in 2010, the ESF-EEN is a network of experts belonging to the EU-27 MS. It aims to collect, analyse and disseminate information about the contribution of the ESF in each MS during the 2007-2013 programming period.³¹

All the information collected is gathered in the **ESF-EEN database**. Although this database is not publicly available, EEN synthesis reports on *Access to Employment, Social Inclusion* and on *main ESF Achievements* are public – see ESF Expert Evaluation Network (2012a, 2012b, 2014).

The EEN database is a valuable source of information about ESF-funded interventions. As it contains extensive (though not always relevant) information on interventions, an efficient way to **extract from the database information** needed for the purpose of this report was identified. Since for each evaluation such relevant information was fragmented into different Excel sheets, the database was processed both manually and through Visual Basic for Applications (VBA) *ad hoc* macros. Crosschecks and double controls were performed throughout the process of extracting information from the database, in order to be able to produce reliable findings in our subsequent analyses.

The ultimate aim of this chapter is to highlight **knowledge gaps**, *i.e. areas where there is evidence of ESF-funded interventions but where no counterfactual impact evaluations have been adopted to evaluate them*. For this purpose, in defining the gaps, the present report 1) focuses on **counterfactual methods** only³² – see DG EMPL Guide (2012) – and 2) it considers CIEs targeting **individuals**. In that respect, the same procedure as in Section 2.3 is followed.

The rest of this chapter is organised as follows. First the characteristics of the EEN dataset are described. Second, the report illustrates the methodological criteria adopted to identify the ESF-EEN evaluations to be used for the discussion of the knowledge gaps. The assessment of the knowledge gaps is presented next and, finally, conclusions are drawn from the existing evidence.

³¹ After the completion of this report, the authors found out that Lithuania conducted some Counterfactual Impact Evaluations on ESF-type of intervention not covered here. Similarly, the Czech Republic has carried out one CIE, which is not included in the report, because it used companies as target group instead of individuals.

³² This means that monitoring is not considered, nor other evaluation strategies such as Cost-Benefit Analysis and Process evaluation, even though they are prevalent in the context of ESF-funded interventions.

3.1 Specificity of the ESF EEN database

The ESF-EEN database is a valuable source of information about ESF-related interventions for accredited researchers and policy makers. It consists of 27 MS-specific Excel files for EU-27 and of an 8-sheet merged Excel composed of a total of 102 columns which describe both quantitative and qualitative characteristics of the evaluations. This last merged file is made up of 13.518 row entries (last accessed on December 2013).

More specifically, the merged ESF-EEN database is structured in the following way. First of all, the starting information for the evaluations carried out in the MS is split into 8 Excel sheets, with the information characterising each single evaluation appearing both in different sheets and, within each sheet, in different rows. In order to merge the raw information from different sheets, two types of identifiers are constructed, one characterising each unique evaluation and another characterising each finding. These identifiers can then be adopted for merging the available information present across different sheets.

Among other evaluation characteristics available in the EEN database, each registered evaluation contains the following information:³³

- **Country:** EU-27 states.
- **Intervention area** (*possibly more than one for each evaluation*): Training, labour market services, employment incentives, start-up incentives, jobs rotation and sharing, institutional capacity and public administration, out-of-work maintenance.
- **State of the evaluation:** Finalised, ongoing, planned.
- **Data collection method** (*possibly more than one for each evaluation*): Case studies, Delphi survey, expert panel, focus group, individual stakeholder interviews, observation, questionnaire survey, SWOT, use of administrative data, use of secondary data, other.
- **Evaluation approach:** Impact evaluation (counterfactual, theory-based, cost-benefit Analysis, other), process evaluation, mixed evaluation.
- **Type of target addressed** (*possibly more than one for each evaluation*): Individuals, enterprises, systems and structures.
- **Target group** (*possibly more than one for each evaluation*): Young people (25- or 27-), unemployed people, other disadvantaged people, disabled people, elderly people (55+),

³³ Other available information concerns: *level of the evaluation* (ESF, OP, NSRF, Priority, Regional); *territorial level* (National/multiregional, Regional); type of evaluation document based on which the evaluation entries in the dataset have been constructed (tender/evaluation concept, interim report(s), final evaluation draft, final evaluation); specification of arrangements, scopes, main evaluation questions (Yes/no and comments). Notice that in the knowledge gap counting the evaluations belonging to the *Education* and *Social Inclusion* intervention areas have been redistributed among the other categories. This has been made because, in the ESF terminology, *Education* and *Social Inclusion* are broad policy fields rather than lower level intervention areas.

self-employed, employed people, inactive people, women, migrants and minorities (except roma), unclear/unspecified, roma.

- **Summary of the findings/conclusions of the evaluation**, both qualitative and quantitative (*possibly more than one for each evaluation*).

The intervention categories present in this database differ from the three broader areas discussed for the review of the academic literature. This choice is mainly motivated by our willingness to use the same categories present in the EEN database without either reclassifying or eliminating any of them. Notice that, in doing so, the categories of interventions considered here are more specific than the three categories on which Section 2.2 is focused.³⁴

In the following, the existing evidence is analysed, identifying the corresponding knowledge gaps, for the following categories of interventions: **Training, Labour market services, Employment Incentives and Start-up incentives**. Interventions from the other categories (Jobs rotation and sharing, Institutional capacity and public administration and Out-of-work maintenance) are not included in our analysis because they do not fulfill the selection criteria presented in the next section.

On top of the above mentioned EEN database information, a number of Excel columns present additional details in open form – notes and excerpts provided by the MAs or made by the EEN experts. Hence, the available information takes the form of quantitative, categorical and open form characteristics of the evaluations. Importantly, given the amount of data to be collected and managed by the network of experts, some EEN database limitations are evident. That is, many database entries, especially comments and notes relative to evaluation results, are missing or are not complete.

This has two main consequences:

First, knowledge gaps are defined at intervention level and, *separately*, at target group level: the joint definition of knowledge gaps at these two levels is not feasible. As highlighted in the above list, each intervention may be labelled as belonging to different intervention areas and may be targeted to different groups. Given the database structure, it is possible to know which intervention areas and target groups correspond to each specific evaluation, but for any given evaluation one cannot univocally identify which target group is linked to which one of the potentially multiple intervention areas.

³⁴ On top of this, it is preferable to minimise the loss of dataset information that would have occurred by limiting the number of intervention areas considered. This has been decided especially because of the extremely low number of CIEs found in the EEN database.

Second, it is not possible to discuss findings in terms of signs and magnitudes, as very often no clear information about significance levels and/or about the population of reference is available.

3.2 Methodological criteria

The next paragraphs present the criteria used to select the ESF-EEN information relevant for the purposes of this report, namely for studying knowledge gaps.

Starting from the full set of **768 unique evaluations** from the 2007-2013 programming period composing the EEN database³⁵, the **counterfactual impact evaluations** targeting **individuals** were selected through the following criteria:

1. Selection of **Impact evaluations** and, among these, of **Counterfactual Evaluations** only.
2. In order to make sure that only proper counterfactual-based evaluations are considered, all comments, notes and excerpts of each entry are checked. This allows to verify whether any of those not previously classified as *Counterfactual Evaluations* were in fact using CIE methods. The focus is on **Randomisation, Matching, Regression Discontinuity Design, Difference-in-differences** and **Instrumental Variables**. Evaluations without at least one quantitative finding or with partial or incomplete results are dropped.
3. Selection of the evaluations targeting **individuals**.

The final number of **unique finalised CIEs targeting individuals is equal to 39**.³⁶ The list of the selected evaluations is shown in Table 26. The corresponding data collection methods (possibly more than one per evaluation) are presented in Table 25.

³⁵ The cut-off date for the collection of data in the EEN database is **December 2013**.

³⁶ Among these 39, three evaluations are considered, which are either part of interim reports or are not the final report, as not fully complete (either in the presentation of the results or in the explanation of the methodology adopted). Nonetheless, the information is ultimately considered sufficient for including the evaluations in the following analyses.

Table 25: Data collection methods

Data collection method	Number of CIEs
Case studies	7
Expert panel	3
Focus group	4
Individual stakeholder interviews ³⁷	13
Questionnaire survey	15
Use of administrative data	25
Use of secondary data	17
Other	6

Source: Authors' calculations based on extractions from the ESF-EEN database.

3.3 Identification of gaps

Throughout this chapter a **knowledge gap** is defined as the lack of CIE-based evidence on the effects of the intervention areas considered.³⁸ In assessing the EEN knowledge gaps the following steps are undertaken:

- **Broad assessment of the lack of CIEs:**

As a first step, the number of CIEs by MS, target group³⁹ and intervention area are **separately** assess.⁴⁰

- **Knowledge gaps assessment:**

This subsection focuses on the disaggregated assessment of the lack of CIEs by **jointly** studying the number of CIEs by intervention area *and* MS. A similar procedure is applied by computing the number of CIEs by target group *and* MS. Next, in discussing the

³⁷ This and especially the previous two data collection methods are not standard methods to collect CIE data. However, evaluations using these data collection types also make use of alternative methods.

³⁸ By doing so one is implicitly assuming that the ESF EEN database contains the universe of ESF-funded interventions evaluated through CIE methods. Although such information is unlikely to be complete (resulting in an overestimation of the knowledge gaps), the quality of the EEN database is such that the number of knowledge gaps appears only slightly overestimated.

³⁹ The *target groups* are: disabled people, employed people, inactive people, migrants and minorities, elderly people (55+), unemployed people, women, young people (25- or 27-), other disadvantaged people, unclear/unspecified.

⁴⁰ The *intervention areas* are: Labour market services, Employment Incentives, Training, Start-up incentives.

knowledge gaps at the intervention and target group levels, the two main knowledge gap tables are discussed (see Table 29 and Table 30). These tables adopt the following classification:

- **Knowledge gaps (blank cells):** absence of CIEs.
- **Covered areas (green cells):** presence of CIEs.

3.3.1 Broad assessment of the lack of CIEs

First, the number of unique evaluations **by country of implementation** (Table 26) is considered.

The first extremely relevant result is that among the EU-27 countries, **16 did not implement any CIEs** of ESF-funded interventions during the last programming period. IT, PT, BE and UK account for 9, 7, 4 and 4 CIEs, respectively (61.5% of the total). Each of these four countries account for at least 10% of the total number of CIEs and IT and PT alone account for 41% of the EEN CIEs.

Table 26: Number of unique CIEs by country⁴¹

Country	Number of CIEs	Evaluation Title
AT	2	Evaluation of LMP measures for young people in the Tyrol; Cost-benefit analysis of employment projects.
BE	4	Impact evaluation of measures for unemployed in 2007 (BE_BX_Results_2007); Impact evaluation of measures for unemployed in 2008 (BE_BX_Results_2008); BE_FL_interventions for the unemployed; BE_BX_final evaluation.
BG	-	
CY	-	
CZ	-	
DE	3	Young people getting self-employed, 2005-2007; German (BUND) ESF-OP in the funding period 2007-2013; Cognitive training activities evaluation, federal programme 'Academy 50plus'.
DK	-	
EE	2	Evaluation of the Business Start-up Subsidy, Work Practice, Coaching for Working Life; Evaluation of "Welfare measures supporting employment 2007-2009" programme.
ES	-	
FI	-	
FR	-	
GR	-	
HU	2	"Improvement of employability of the disadvantaged" programme; "One step ahead!" programme. ⁴²
IE	3	Review of Labour Market Programmes; Activation in Ireland: An Evaluation of the National Employment Action Plan; Literacy, Numeracy and Activation Amongst the Unemployed.
IT	9	Training and Occupation Vouchers Effectiveness. Thematic Evaluation; Placement evaluation report; Third Annual Evaluation Report; 2011 Evaluation Report; ESF Training Policies Employment Results: 2011 annual placement report; Training interventions for workers in redundancy schemes evaluation. Counterfactual method analysis perspectives and first results; ESF OP 2007-2013 Regione Marche Job Grants Evaluation; Training interventions placement results in Piedmont Region. Annual Report 2012; Study Abroad Programs Effects - MOS4 Project Experience.
LT	-	
LU	-	
LV	-	

⁴¹ For some countries, like CZ, LT and SE, the number of CIEs analysed in this report is null since the evaluations present in the EEN database do not fulfill the requested methodological requirements in terms of the evaluation approach.

⁴² As of December 2013, the two HU evaluations were not present in the EEN database. In order to include them in the analyses, different sources of information have been adopted.

MT	-	
NL	-	
PL	2	Impact of ESF interventions on labour market - Podlaskie region; Analysis of the value of result indicators achieved within the HC OP's regional component.
		External evaluation of the impact of the expansion of professional courses on the national qualification system;
PT	7	New Opportunities Initiative: Results of the External Evaluation (2009-2010); Study for the evaluation and monitoring of basic and secondary education; Evaluation of the NSRF 2007-2013 macro-economic impact; Evaluation Study on the Operationalization of the Outcomes Generated by the SMEs Training Program; Evaluation study of the active labour market policies; Evaluation study of the contribution of the NSRF for the reduction of early school leaving.
RO	-	
SE	-	
SI	1	Evaluation of the biggest programs of Active Employment Policy.
SK	-	
UK	4	Early Impacts of the European Social Fund 2007-13; The 2010 European Social Fund Leavers Survey; Evaluation of ESF Priority 2: Increasing Employment and Tackling Economic Inactivity; Secondary Analysis of the 2009 and 2010 ESF Leavers Survey.
Total CIEs	39	

Source: Authors' calculations based on extractions from the ESF-EEN database.

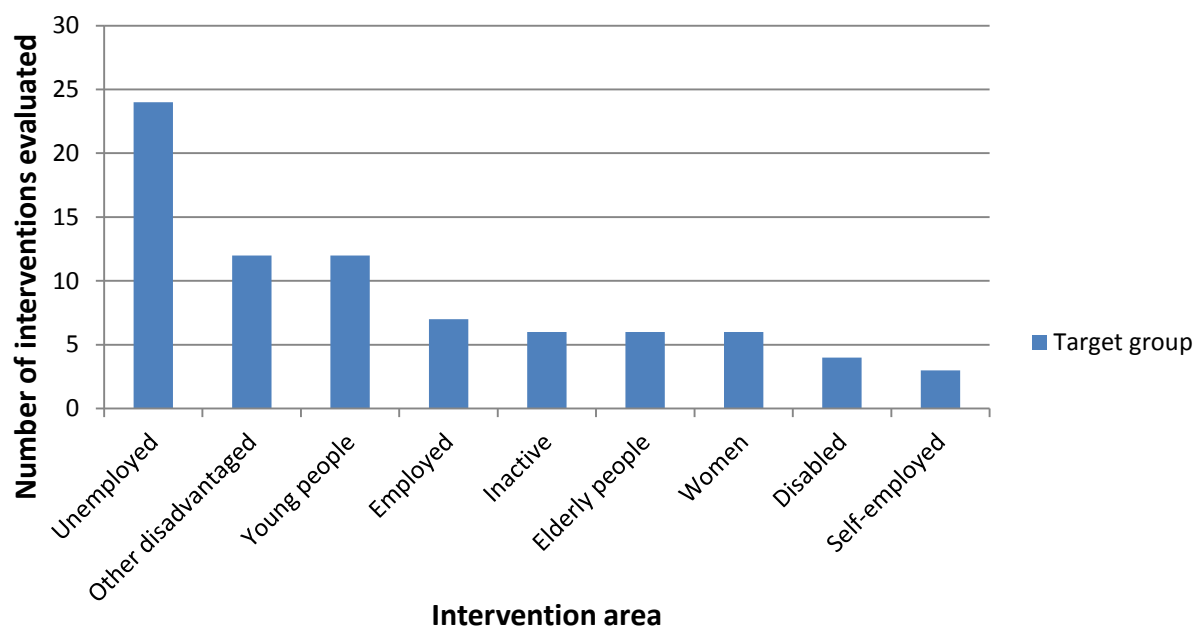
Next consider the **number of CIEs by target group** (Table 27).

Table 27: Number of CIEs by target group

Target group	Number of CIEs
Disabled	4
Employed	7
Inactive	6
Migrants/minorities	2
Elderly people (55+)	6
Other disadvantaged	12
Self-employed	3
Unemployed	24
Women	6
Young people (25- or 27-)	12
Unclear/unspecified	3
Total	85

Source: Authors' calculations based on extractions from the ESF-EEN database.

Figure 4: Number of CIEs by target group



Source: Authors' calculations based on extractions from the ESF-EEN database.

All target groups are to some extent addressed in the selected CIEs. Nonetheless, the different categories are covered differently. Specifically, three target groups (*Unemployed*, *Other disadvantaged* and *Young*) are addressed in 24, 12 and 12 CIEs, respectively. Overall, these 3 groups appear 48 times (56% of the total).⁴³

Next, the **number of CIEs by *Intervention area*** (Table 28) is computed.

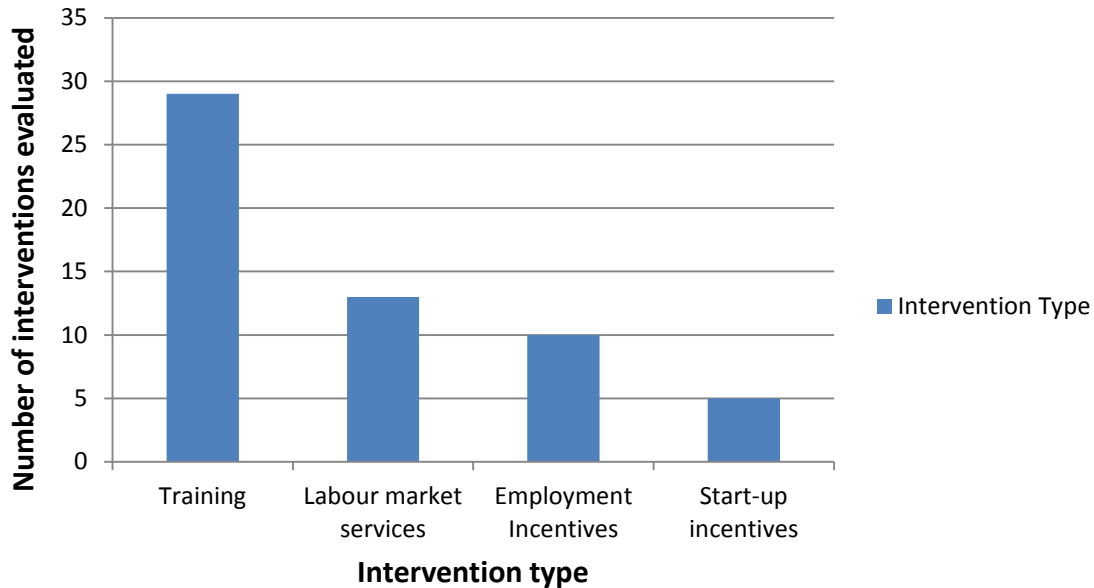
Table 28: Number of CIEs by intervention area

Intervention area	Number of CIEs
Employment Incentives	10
Labour market services	13
Start-up incentives	5
Training	29

Source: Authors' calculations based on extractions from the ESF-EEN database.

⁴³ It can be stressed that Table 26 reports the number of unique evaluations by country, while in Table 27 the entries are the number of target groups in the evaluations. The totals are different because each evaluation may be targeted to two or more groups of people. Similar reasoning holds for Table 28.

Figure 5: Number of evaluations by intervention area



Source: Authors' calculations based on extractions from the ESF-EEN database.

Relative to the other intervention areas, *Training* is most often evaluated through CIEs (29 out of 57, 51%). Moreover, *Labour market services* and *Employment incentives* are evaluated 13 and 10 times, respectively, accounting for 23% and 18% of the total number of evaluated intervention areas.

3.3.2 Knowledge gaps assessment

Table 27 and Table 28 are next disaggregated by country in order to have a more in-depth overview of the CIEs carried out so far.

First, it is possible to **disaggregate Table 28 by country**: see Table 29, reporting the number of CIEs by **intervention area** (again, the same CIE may be classified as belonging to more than one intervention area).

For **Training**, 8 CIEs have been carried out in IT and 7 in PT, while both IE and UK show up in the table with 3 CIEs classified under Training. Furthermore, by disaggregating the **Labour market services** category by the number of CIEs, most evaluations in this category have been carried out in BE, PT, UK (4, 3, 2, respectively). Moreover, evaluations of **Employment incentives** interventions have mainly been conducted in PT, PL and EE (3, 2 and 2, respectively).

Next, it is possible to **disaggregate Table 27 by country**. See Table 30, relative to the number of CIEs **targeting specific groups** of recipients.

The **unemployed** target group is the most prevalent in terms of the number of CIEs (24). In particular, with 7 CIEs, IT is the most represented country, followed by UK and IE with 4 and 3 CIEs, respectively. The two other target groups that are well represented are **other disadvantaged** and **young**. In the former case, PT, BE and HU have 3, 2 and 2 CIEs, respectively, while in the latter PT, IE and PL have 4, 2 and 2 CIEs, respectively. A second group of target groups presents a relatively low number of CIEs. In particular, there is no country where more than 2 CIEs have been implemented for interventions addressed to any of the **disabled, employed, migrants/minorities, elderly, self-employed** and **women** target groups. These categories are covered by a number of CIEs ranging from 2 (in the case of *Migrants/minorities*) to a maximum of 7 (*Employed*).

Table 30 also provides interesting information with respect to the **countries** where the interventions have been implemented.⁴⁴ UK CIEs cover 13 groups of recipients (mainly Inactive and Unemployed), followed by PT (11) and PL (10). In particular, PL covers a wider range of target groups (all the categories but Migrants/minorities and Inactive), while PT CIEs are mainly regarding interventions targeted to young and other disadvantaged. Three other countries have implemented a relatively high number of CIEs directed to the target groups considered: IT, IE and EE (9, 8, and 8, respectively). IT CIEs are mostly for interventions targeting unemployed people (7 out of 9 evaluations), while IE recipients are more differentiated (this is the case also for EE, where all but 3 target groups – elderly, self-employed, women – are addressed through CIEs). By inspecting the table it is clear that with respect to unemployment, IT is by far the most represented country, followed by UK and IE (4 and 3 CIEs, respectively). On the other hand, PT is the MS showing the highest number of CIEs for interventions targeted to young people and other disadvantaged people (4 and 3 CIEs, respectively), while UK shows the same feature with respect to inactive people (4 CIEs).

Starting from the information available in the two disaggregated tables, one can now focus on the existing knowledge gaps both at intervention and at target group level, by country of implementation. In doing so, the previously introduced definition of *knowledge gap* is adopted: given a specific MS, there exists a knowledge gap if there is no evidence of any CIE.

Table 29 focuses on **Intervention Area knowledge gaps**, by country.

First, the intervention area of **Start-up incentives** has been evaluated through CIEs only in 4 countries. As shown above, also the number of CIEs for this last category is the lowest one (5 in total, 2 in *DE* and one in the remaining 3 MS).

⁴⁴ Notice that the numbers are different from the ones in Table 26, where the entries were relative to the number of *unique* CIEs by MS. Here the numbers are relative to how many times each target group appears in the CIEs, by MS.

Slightly smaller is the knowledge gap for **Employment incentives** CIEs which are carried out in 6 MS and **Labour market services** interventions, which are covered in 7 MS (21 and 20 knowledge gaps, respectively).

Finally, **Training** displays the lowest amount of intervention area gaps (16 gaps, relative to BG, CY, CZ, DK, ES, FI, FR, GR, LT, LU, LV, MT, NL, RO, SE and SK). Notice that this intervention area is characterised by a relatively low number of knowledge gaps, but the countries show quite different features in terms of how many interventions have been carried out (as noted, IT, PT and to a lesser extent UK, IE and HU have conducted a higher number of CIEs, while the other MS have each implemented one CIE only).

Next one can focus on **target group knowledge gaps**, by country (see Table 30). In doing so, one can again distinguish among three broad clusters of target groups in terms of knowledge gaps.

Three target groups are characterised by an extremely high number of gaps. They are the **disabled, migrants/minorities, self-employed** and **inactive** target groups, with the first three categories characterised by 24 country-level knowledge gaps, and the last with 25. The second cluster is composed of the **employed, elderly people** and **women**, with 21, 21, and 22 country level knowledge gaps each. Finally, the target groups with the lowest amount of country level knowledge gaps are **young people, other disadvantaged** and **unemployed** (20, 19 and 17 countries with gaps, respectively).

Table 29: Number of CIEs by intervention area and country

Intervention Area*	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	Total
<i>Employment Incentives</i>								2					1		1						2	3			1			10
<i>Labour market services</i>	1	4						1					1									3			1		2	13
<i>Start-up incentives</i>						2		1													1	1						5
<i>Training</i>	1	1				1		1					2	3	8						1	7			1		3	29
Total intervention areas addressed in CIEs, by MS	2	5	0	0	0	3	0	5	0	0	0	0	4	3	9	0	0	0	0	0	4	14	0	0	3	0	5	57

* For each Member State, the table reports how many times the interventions are classified as belonging to a given intervention area.

Table 30: Number of CIEs targeting the recipients groups, by country

Target group*	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	Total
Disabled		1						1													1						1	4
Employed								1						1							1	2			1		1	7
Inactive								1							1												4	6
Migrants/minorities						1		1																				2
Elderly people		1				1							1	1							1						1	6
Other disadvantaged	1	2						1					2	1	1						1	3						12
Self-employed		1																			1	1						3
Unemployed	1	2				1		2					1	3	7						2				1	4	24	
Women						1								1							1	1					2	6
Young people	1					1		1						2							2	4			1			12
Unclear/unspecified																						3						3
Total target groups addressed in CIEs, by MS	3	7	0	0	0	5	0	8	0	0	0	0	4	9	9	0	0	0	0	0	10	11	0	0	3	0	13	82

* For each Member State, the table reports how many times the interventions are classified as targeting a given target group.

Source: Authors' calculations based on extractions from the ESF-EEN database.

Legend	
	Intervention area/target group evaluated through at least one CIE
	Knowledge gap

3.4 Final Considerations

This chapter focuses on the counterfactual impact evaluations reported and summarised in the ESF-EEN. Evidence on knowledge gaps has been presented in detail in the previous paragraphs. Results are summarised here in view of drawing further conclusions in the final chapter of this report.

First, among the 27 EU countries covered in the database, there are 16 country-level knowledge gaps⁴⁵. These are: BG, CY, CZ, DK, ES, FI, FR, GR, LT, LU, LV, MT, NL, RO, SE and SK. During the previous programming period most of these countries implemented non-counterfactual evaluations,⁴⁶ hence from the European Commission's perspective it is indeed of interest to put more effort towards developing a CIE culture in these MS.

Second, the analysis of the evaluations by *target group* has shown that **there is a high number of knowledge gaps for disabled, inactive, migrants/minorities, self-employed and to a lesser extent, for employed, elderly people and women.** The same analyses separately carried out by *intervention area* present similar results in terms of high number of knowledge gaps for *Start-up incentives* and to a lesser extent for *Employment incentives*.

Importantly, there is evidence for some imbalance in terms of knowledge gaps in Eastern/South-Eastern European countries as compared to Western/South-western and Northern European countries. In fact, none of BG, CZ, LT, LV, RO and SK report CIEs of ESF-funded interventions. Two notable exceptions for this pattern are PL and EE, with a relatively good coverage of target groups and intervention areas through CIEs.

Regardless of the absolute number of implemented CIEs, the countries with a wide range of intervention areas that have been covered by counterfactual evaluations are AT, HU, PL, PT and SI. In addition, in BE, DE, EE, IE, PL, PT and UK a wide range of target groups participated in interventions evaluated through CIEs.⁴⁷ Hence, at least for those intervention areas and target groups that are well covered by CIEs in some MS, it could be possible in the future to further promote counterfactual-based evaluations in countries that up to now have been less prone to adopting such methods. This is particularly true for MS with a complete lack of CIEs – especially the ones that joined the EU area most recently. These MS would highly benefit from the promotion of CIE methods. However, the implementation of CIEs is strictly related to the actual need of interventions targeting specific groups of recipients. In other words, different CIE gaps have different socio-economic and political relevance. This issue will be addressed in detail in the next chapter.

⁴⁵ According to the information gathered for the 2007-2013 programming period by the national experts of the ESF-EEN by December 2013.

⁴⁶ Information about such evaluations is present in the EEN database but is not presented here, since the focus of the report is on CIEs.

⁴⁷ In *absolute* terms, the number of CIEs implemented for studying the impact of ESF-funded interventions is extremely low (39 out of the total 768 EEN database evaluations).

4 Criteria for analysing the knowledge gaps

This chapter provides a general discussion about the urgency with which the knowledge gaps identified in this report should be filled.

Three different criteria are considered jointly, in order to take into account both the size of labour market interventions and their political relevance within the employment objectives of the different European countries. These criteria and the data sources used for their definition are described in Section 4.1.

Next, in Section 4.2 the criteria are applied to the knowledge gaps relative to the academic literature. The identified knowledge gaps are discussed separately for each of the three different intervention areas analysed in Subsections 2.3.1-2.3.3 (*Training, Private sector employment incentives and public sector employment*, and *Labour market services*). This will allow us to provide a first assessment of the relevance of the knowledge gaps specific for each MS.

Section 4.3 analyses the criteria considering the knowledge gaps identified in the ESF-EEN database. Because of the specificity of the ESF-EEN database highlighted in Chapter 3, one cannot conduct an assessment of the identified gaps based on the three criteria for each ESF intervention area, unlike for each intervention area described in the academic literature. Therefore, a general discussion of the knowledge gaps is provided, regardless of the intervention areas, based on groups targeted by interventions, following the same scheme of analysis as for the academic literature. This allows to jointly consider the information retrieved from the academic literature and from the EEN database.

4.1 Methodology adopted for defining the criteria

In Chapter 1, knowledge gaps were defined as the “lack of CIE-based evaluation of an ESF-type intervention, suitable to be evaluated with such methods.” Despite maintaining this definition throughout the report, a different approach was required in evaluating the gaps in the academic literature (Chapter 2) and in the EEN (Chapter 3). In fact, in the former case one can identify knowledge gaps jointly by intervention area *and* target group, while in the latter this can be done only separately.⁴⁸

As a consequence, the criteria *jointly* are first applied by intervention area and target group for the gaps in the academic literature only. Then *the same set of criteria* defined here are applied to both the academic literature and the EEN, by target groups, regardless of the intervention area.

⁴⁸ See Section 3.1 for additional information.

4.1.1 Criteria for intervention and target group analysis

This subsection presents the three criteria employed to assess the knowledge gaps for each intervention area and the corresponding data sources.

For the first two criteria, one can consider the interventions' expenditure and number of participants as measure of their relevance in order to take into account both the order of magnitude of funds allocated to each ALMP and their level of coverage within the labour force. These two values jointly also offer a measure of the per capita cost of interventions. For both measures, information is collected separately for each area of intervention within the different ALMP, to measure the relative relevance of each category in the past programming period. These indicators of intervention relevance can be taken into account in order to evaluate which are the interventions for which knowledge gaps have to be filled more urgently.

In order to compute the levels of expenditure and participants in each MS⁴⁹ for these first two criteria 2011 Eurostat data is used⁵⁰. Although they do not allow to distinguish between the amount of MS national expenditure and the amount of European Social Fund received by each MS from the European Commission, this information can be used as a proxy for the national preferences in terms of ALMP.

Eurostat data are provided for the following seven labour market policies categories: *Labour Market Services*, *Training*, *Employment incentives*, *Sheltered and supported employment and rehabilitation*, *Direct job creation* and *Start-up incentives*. These data are aggregated in order to obtain information for the reference categories discussed in this report, according to the following scheme:

- **Training** corresponds to Eurostat category 2 *Training*;
- **Private sector employment incentives and public sector employment** combines Eurostat categories 3-6: *Employment incentives*, *Sheltered and supported employment and rehabilitation*, *Direct job creation* and *Start-up incentives*;
- **Labour Market Services** corresponds to Eurostat category 1 with the same name. Note that the expenditure data for this category also includes administration costs, while the expenditure for the other two categories covers only direct costs of the measures.

⁴⁹ Note that for some countries, the data on either expenditure or participants (or both) is flagged as unreliable or estimated. For the full list of flags, consult the Eurostat database:

http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/labour_market_policy/main_tables.

⁵⁰ In order to perform our analysis on all current EU-28 MS, also Croatia was included in this study. For this country, 2012 data was used as it is the only year available due to its recent accession. For Greece 2010 data and for the UK 2009 data was used; this option was chosen to include these countries in the analysis even if the data they provided for 2011 were mostly missing.

The following steps were taken:

- 1) The total ALMP expenditure is calculated by summing the total expenditure in category 1 and the total expenditure in categories 2-7 (both values are provided by Eurostat⁵¹).
- 2) For each country one can calculate the **shares of expenditure** on each intervention area in terms of the total ALMP expenditure so as to get an idea of the importance attributed to it financially.
- 3) In order to measure and compare the national expenditure with respect to other MS in relative terms, one can consider the whole distribution of expenditures in the 28 MS and highlight the shares of expenditure which are above the EU-28 average or which fall in the top 25% of the distribution.

Criterion 1: *share of expenditure on each intervention* as a percentage of total ALMP expenditure in each MS.

High Expenditure: defined as **above EU28 average** or **top 25%**.

The absolute values of total ALMP expenditure in each MS are displayed in Table 31. To perform a comparison among the EU-28 MS, as criteria for analysing the knowledge gaps, one can use percentage values of expenditure on each intervention in terms of the total ALMP expenditure and, in the final section, the percentage values of ALMP expenditure in terms of the national GDP.

A similar process is employed by calculating the total number of participants in ALMPs and the **shares of participants** in each intervention and by comparing the national values within the distribution of the EU-28 MS.

- 1) The total number of participants⁵² in ALMPs is obtained by adding up the total number of participants in category 1 and the total number of participants in categories 2-7 (both values are provided by Eurostat).⁵³
- 2) One then calculates the shares of participants by dividing the number of participants in each intervention by the total number of participants.
- 3) For each given MS, the share of participants is defined similarly as for the share of expenditure (above the average or in the top 25% of the distribution).

⁵¹ The Labor Market Policy database collects data on the public expenditure associated with each intervention. For each intervention, the expenditure required should cover the whole of transfers and foregone revenue provided to the direct recipients as a result of the intervention. Any other indirect costs are considered as part of the administration costs of an intervention.

Source: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-GQ-13-002/EN/KS-GQ-13-002-EN.PDF.

⁵² The number of participants refers to the annual average stock of participants, i.e. the average number of persons participating in an intervention at any point during the year.

⁵³ The number of participants is aggregated in each of the categories 1-7 for Lithuania only, since the total for categories 2-7 for this MS is missing.

Criterion 2: *share of participants in each intervention* as a percentage of total participants in ALMPs in each MS.

High Expenditure: defined as **above EU28 average** or **top 25%**.

In order to define MS-specific relevant policy areas, one can make use of the *Employment Performance Monitor and Benchmarks* document (Employment Committee 2013). For each MS, information is collected on identified key employment challenges that have a direct relation to the interventions that are studied here, i.e. those challenges which have the potential to be addressed by the types of intervention under analysis in this report.⁵⁴

Once the set of employment challenges has been defined, one can assess whether these have been addressed by interventions evaluated through CIEs and found in the academic literature. This is equivalent to checking the tables of available findings in Chapter 2 to see if the target groups for which there exists CIE evidence can be linked to any of the employment challenges.

Criterion 3: *key employment challenges*.

Country-specific challenges covered by CIEs: a country-specific employment challenge is considered as “covered” if there exists evidence of one or more interventions addressing it and **evaluated through CIE methods**.

Overall, it is worth stressing that the first two criteria are defined at intervention area- and MS-level, while the key employment challenges are defined at MS-level only – meaning that the overall set of employment challenges does not vary across intervention area.

⁵⁴ Examples include challenges that refer to the participation of different target groups in the labour market, and (un)employment rates. The following challenges are excluded: challenges that have to do with levels of education and participation in lifelong learning, poverty levels, the structure of the labour market and childcare policies.

4.1.2 Criteria for target group analysis

As it has already been mentioned in the introduction to this chapter, a slightly different approach is employed to apply the three criteria at target group-level. This entails that for **criterion 1**, instead of using the share of expenditure on each intervention as a percentage of ALMP, the **share of ALMP expenditure as a percentage of GDP** is considered. For **criterion 2**, the **total number of ALMP participants** is used without computing shares. Criterion 3 is left unchanged.

One can proceed in this way for the evidence found in the EEN and results are presented in Section 4.3. As said, in the same section no distinction is made between areas of interventions also for the academic literature.

Table 31: ALMP expenditure

Country	ALMP expenditure	Country	ALMP expenditure
AT	6,113.91	IE	5,676.913
BE	10,921.48	IT	26,919.844
BG	227.96	LT	172.107
CY	185.19	LU	490.136
CZ	863.87	LV	138.637
DE	47,443.69	MT	32.009
DK	8,960.86	NL	16,409.125
EE	116.65	PL	2,675.694
ES	38,654.13	PT	3,237.728
FI	4,634.52	RO	479.181
FR	46,650.46	SE	6,988.989
GR	na	SI	443.586
HR	na	SK	546.788
HU	1,026.40	UK	na

Source: Eurostat, 2011

* The MS-specific total is relative to all the ALMPs (Training, Private and public sector employment incentives and Labour market services).

Data on the public expenditure associated with each intervention are collected in the Labor Market Policy database. For each intervention, the expenditure required should cover the whole of transfers and foregone revenue provided to the direct recipients as a result of the intervention. Any other indirect costs are considered as part of the administration costs of an intervention.

Source: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-GQ-13-002/EN/KS-GQ-13-002-EN.PDF.

4.2 Results of intervention and target group analysis

The following paragraphs apply the set of criteria defined in 4.1.1 with the aim of separately studying the urgency of the knowledge gaps relative to the *Training, Private sector employment incentives and public sector employment* and *Labour Market Services* intervention areas. The first two criteria - *Share of ALMP expenditure* and *Share of ALMP participants* – will be discussed jointly, while the last criterion, *Key employment challenges*, will complete the overall criteria assessment.

4.2.1 Intervention area 1: Training

By focusing on the shares of expenditure and participants in *Training* programs, Table 32 shows 4 MS with both **expenditures and number of participants in the two top 25% distributions**: AT, FI, IE, and PT. Among these, only for FI and IE there exists evidence of CIEs evaluating training programs addressing their respective key employment challenges (see the green cells in the last column of the table). For the remaining 2 MS, no CIEs linked to the employment-related problematic areas have been carried out in the time range considered.

For a second group of 5 countries, only **one criterion** out of the first two considered is **in the EU-28 top 25%**. Specifically, for DE, EE, and LV one criterion is in the top 25% and the other one above the average. Instead, for IT and MT the other criterion is neither above the average, nor in the top 25%. By taking into account the key employment challenges of this group of countries, Table 32 shows that only LV⁵⁵ evaluated interventions relative to employment-problematic areas through CIE methods, while the other MS did not.

Two countries show **both expenditure and participants above the EU-28 average** (DK and FR). Only for FR there is evidence of CIE methods being used for evaluating interventions in one of its problematic areas (youth unemployment). On the other hand, for CY, ES, HR, NL, RO and SI **only one criterion** out of the first two **is above the EU-28 average**. Only SI addresses its employment challenges through CIEs.⁵⁶

A final group of 11 Member States do **not show high shares of expenditure/participants** (BE, BG, CZ, GR, HU, LT, LU, PL, SE, SK and UK). Out of these countries, only UK and PL adopted CIE methods for evaluating interventions relative to problematic areas.⁵⁶

⁵⁵ Even though there are many papers evaluating interventions from Germany, none of these refer to interventions targeted to the inactive, which seem to be a problematic group.

⁵⁶ For SI (PL) there is (are) one (three) papers targeting the (general) unemployed. Since the key employment challenges taken together cover a wide range of categories of the unemployed, all key employment challenges are classified as addressed by CIEs.

4.2.2 Intervention area 2: Private sector employment incentives and public sector employment

This subsection investigates the relevance of the knowledge gaps relative to the *Private sector employment incentives and public sector employment* intervention area. As in the previous subsection, the shares of participants and of expenditures will be discussed jointly, while the last criterion, *Key employment challenges*, will complete the overall qualitative assessment.

Table 33 shows 4 MS with both **expenditures and number of participants in the two top 25% distributions**. These are: GR, HU, PL and SK. None of these MS address their respective employment-problematic areas through CIEs.

A second group of 3 countries shows **one criterion** out of the first two **in the EU-28 top 25%**. In particular, for CY and ES one criterion is in the top 25% and the other one above the average. Instead, for BE the other criterion is not classified as high. With respect to the key employment challenges specific for these MS, none of them has been addressed through CIEs.

Six countries show **both expenditure and participants above the EU-28 average** (BG, CZ, LU, LV, NL and UK). For BG and UK there is evidence of CIEs used to evaluate interventions addressing problematic areas. On the other hand, in the other 5 Countries (DK, LT, RO, SE and SI) **only one criterion** out of the first two **is above the EU-28 average**. Again, none of these MS address their employment-problematic areas through CIEs.

Finally, 10 Member States do **not show high shares of expenditure/participants** (AT, DE, EE, FI, FR, HR, IE, IT, MT and PT). Out of these countries, only FR and IT adopted CIEs to evaluate interventions relative to problematic areas.

4.2.3 Intervention area 3: Labour market services

This last subsection applies the urgency criteria introduced at the beginning of the current chapter to the gaps relative to the *Labour Market Services* intervention area. The structure of the analysis is the same as the one adopted in the previous subsections.

First, notice that Eurostat data on the *share of participants* criterion is often missing. Table 34 shows only one MS with both **expenditures and number of participants in the two top 25% distributions**: NL. In this country CIE methods have been adopted to evaluate interventions addressing problematic areas.

A wider group of countries shows **one criterion** out of the first two **in the EU-28 top 25%**. The countries, 8 in total, are: BE, CZ, DE, EE, MT, RO, SE and UK. Among those, for EE only one criterion is in the top 25% and the other one above the average. For the other countries, the other criterion is not classified as high. Only UK addresses employment-problematic areas

through CIEs. For this MS, as it was the case for the two previous intervention areas, CIE methods are used for evaluating interventions targeted to the young unemployed.

A third group of countries show **both expenditure and participants above the EU-28 average** (FR) or **only one criterion** out of the first two **above the EU-28 average** (AT, HR, LT and SI). None of these MS address their employment-problematic areas through CIEs.

Finally, the remaining 14 Member States do **not show high shares of expenditure/participants**. Out of these countries, only IE and PT evaluated interventions addressing problematic areas through CIEs.

Table 32: Criteria for training

Training			
Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
AT	60.04%	49.54%	Low employment rates among elderly people; Low total hours worked for women.
BE	9.46%	13.30%	Low participation of elderly workers; Low participation of non-EU nationals; Above average long-term unemployment incidence.**
BG	12.89%	15.21%	Low employment, particularly for men, young workers, low-skilled; The youth NEET is significantly worse than the EU-average; Long-term unemployment high and activation is low.
CY	16.40%	33.21%	Youth NEET are higher than the EU-average; Employment rate is above EU but deteriorating.
CZ	4.37%	-	Employment rate of low-skilled is low; Activation is relatively low.
DE	32.80%	46.54%	Activation is decreasing.
DK	23.81%	35.57%	Relatively low employment of non-EU nationals.
EE	40.37%	34.51%	Employment rates of low-skilled low; Youth unemployment is high; Long-term unemployment high indicating structural unemployment; Activation is relatively low; Participation of low-skilled persons in education and training is low.
ES	23.08%	12.05%	High incidence of youth unemployment and NEET; Low employment for elderly workers, men and non-EU nationals; Long-term unemployment very high.
FI	52.72%	52.24%	Youth unemployment high; Employment rate of the low-skilled well below the overall rate; Low participation of age group 60–64; Low activation rate of LTU leads to stagnating numbers.
FR	38.27%	30.29%	Deteriorating youth unemployment;** Low employment rate for elderly workers; Low employment rate non-EU nationals.
GR (2010 data)	7.56%	1.75%	Employment sig. under EU average, especially for women and youth; High incidence of NEET; Long-term unemployment is high.
HR (2012 data)	22.79%	37.34%	Employment significantly lower than EU-average especially for men, young and elderly workers (in the age group 55-59); NEET and unemployment for young is particularly high and increasing; Long-term unemployment for youth particularly high.
HU	7.27%	6.70%	Overall low employment rates especially for certain groups (youth, elderly workers and low-skilled); High youth unemployment and increasing NEET rates.
IE	46.79%	52.59%	Employment for both men and women is below the EU average; Unemployment is particularly high among young; Long-term unemployment very high. Activation measures are low.**
IT	41.49%	-	Low employment for young NEETs; Low employment for women and non-EU nationals;

Training			
Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
			Long-term unemployment high.
LT	8.56%	12.86%	Employment rates for men, low-skilled and youth are low (for low-skilled significantly). Employment rate for elderly workers is high but deteriorating for both men and women; Unemployment rate of youth is high; Long-term unemployment is high.
LU	8.56%	5.88%	Low employment of elderly workers, in particular elderly females; High youth unemployment; Activation is higher than EU average but shows sig. negative trend.
LV	38.76%	31.54%	Low employment rate; Employment rate for low-skilled low; Unemployment rate for youth (15-24) is higher than the EU-average but show significantly positive developments. Youth NEET is high; Long term unemployment is high.
MT	18.37%	97.00%	Despite some positive development, the employment rate remains low especially for elderly females and, low-skilled workers; The inactivity trap for the 2nd couple member is a persisting challenge.
NL	12.28%	31.37%	Low employment rates for non-EU nationals; Low total amount of hours worked.
PL	2.80%	1.07%	Low employment rate of low-skilled; In spite of recent improvements, low employment rate of elderly; High youth unemployment; Hidden unemployment In rural areas, limited shift into off-farm jobs.
PT	55.44%	40.67%	Negative employment rates trend, especially for men, elderly, youth; Youth unemployment rate and Youth NEET are above the EU average; Long-term unemployment is higher than the EU-average.
RO	9.64%	34.42%	Employment rates among young, women and elderly people are low; Youth NEETs above EU average, decreasing trend compared to 2011.
SE	8.07%	6.92%	Relatively low employment of non-EU nationals.
SI	22.18%	28.56%	Low employment rates for low-skilled is below EU average; Very low employment rates of elderly workers In particular women; High increase of unemployment rate for the young; Since 2009, long term unemployment rate significantly increased.
SK	0.12%	0.13%	Employment is low for all groups in particular youth and low-skilled; Youth unemployment high; Long-term unemployment significantly higher than the EU-average and the activation is at a lower level than the EU-average.
UK (2009 data)	4.25%	-	Youth unemployment is high and especially young NEET are high.

* The MS-specific total is relative to all the ALMPs (Training, Private and public sector employment incentives and Labour market services).

High Expenditure and high Number of Participants: defined as above EU-28 average or top 25%.

Country-specific challenges: challenges with CIE evidence in the literature.

Table 33: Criteria for private and public sector employment incentives

Private sector and public sector employment incentives			
Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
AT	15.39%	25.16%	Low employment rates among elderly people; Low total hours worked for women.
BE	77.20%	54.31%	Low participation of elderly workers; Low participation of non-EU nationals; Above average long-term unemployment incidence.
BG	64.25%	84.79%	Low employment, particularly for men, young workers, low-skilled; The youth NEET is significantly worse than the EU-average; Long-term unemployment high and activation is low.
CY	74.06%	66.79%	Youth NEET are higher than the EU-average; Employment rate is above EU but deteriorating.
CZ	60.31%	91.61%	Employment rate of low-skilled is low; Activation is relatively low.
DE	23.94%	38.76%	Activation is decreasing.
DK	50.13%	64.43%	Relatively low employment of non-EU nationals.
EE	23.74%	43.45%	Employment rates of low-skilled low; Youth unemployment is high; Long-term unemployment high indicating structural unemployment; Activation is relatively low; Participation of low-skilled persons in education and training is low.
ES	63.88%	86.07%	High incidence of youth unemployment and NEET; Low employment for elderly workers, men and non-EU nationals; Long-term unemployment very high.
FI	34.64%	46.16%	Youth unemployment high; Employment rate of the low-skilled well below the overall rate; Low participation of age group 60–64; Low activation rate of LTU leads to stagnating numbers.
FR	34.73%	34.84%	Deteriorating youth unemployment; Low employment rate for elderly workers; Low employment rate non-EU nationals.
GR (2010 data)	87.86%	98.25%	Employment sig. under EU average, especially for women and youth; High incidence of NEET; Long-term unemployment is high.
HR (2012 data)	50.62%	62.66%	Employment significantly lower than EU-average especially for men, young and elderly workers (in the age group 55-59); NEET and unemployment for young is particularly high and increasing; Long-term unemployment for youth particularly high.
HU	90.08%	93.30%	Overall low employment rates especially for certain groups (youth, elderly workers and low-skilled); High youth unemployment and increasing NEET rates.
IE	37.06%	47.41%	Employment for both men and women is below the EU average; Unemployment is particularly high among young; Long-term unemployment very high. Activation measures are low.
IT	49.14%	53.60%	Low employment for young NEETs; Low employment for women and non-EU nationals;

Private sector and public sector employment incentives

Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
			Long-term unemployment high.
LT	60.56%	84.36%	Employment rates for men, low-skilled and youth are low (for low-skilled significantly). Employment rate for elderly workers is high but deteriorating for both men and women; Unemployment rate of youth is high; Long-term unemployment is high.
LU	81.11%	94.12%	Low employment of elderly workers, in particular elderly females; High youth unemployment; Activation is higher than EU average but shows sig. negative trend.
LV	51.55%	68.31%	Low employment rate; Employment rate for low-skilled low; Unemployment rate for youth (15-24) is higher the EU-average but show significantly positive developments. Youth NEET is high; Long term unemployment is high.
MT	12.60%	3.00%	Despite some positive development, the employment rate remains low especially for elderly females and, low-skilled workers; The inactivity trap for the 2nd couple member is a persisting challenge.
NL	52.95%	31.36%	Low employment rates for non-EU nationals; Low total amount of hours worked.
PL	77.01%	98.70%	Low employment rate of low-skilled; In spite of recent improvements, low employment rate of elderly; High youth unemployment; Hidden unemployment In rural areas, limited shift into off-farm jobs.
PT	24.37%	59.33%	Negative employment rates trend, especially for men, elderly, youth; Youth unemployment rate and Youth NEET are above the EU average; Long-term unemployment is higher than the EU-average.
RO	34.17%	65.58%	Employment rates among young, women and elderly people are low; Youth NEETs above EU average, decreasing trend compared to 2011.
SE	68.37%	62.72%	Relatively low employment of non-EU nationals.
SI	48.32%	71.44%	Low employment rates for low-skilled skilled is below EU average; Very low employment rates of elderly workers In particular women; High increase of unemployment rate for the young; Since 2009, long term unemployment rate significantly increased.
SK	75.44%	99.87%	Employment is low for all groups in particular youth and low-skilled; Youth unemployment high; Long-term unemployment significantly higher than the EU-average and the activation is at a lower level than the EU-average.
UK (2009 data)	6.23%	68.04%	Youth unemployment is high and especially young NEET are high.

* The MS-specific total is relative to all the ALMPs (Training, Private and public sector employment incentives and Labour market services).

High Expenditure and high Number of Participants: defined as above EU-28 average or top 25%.

Country-specific challenges: challenges with CIE evidence in the literature.

Table 34: Criteria for labour market services

Labour market services			
Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
AT	24.57%	25.29%	Low employment rates among elderly people; Low total hours worked for women.
BE	13.34%	32.39%	Low participation of elderly workers; Low participation of non-EU nationals; Above average long-term unemployment incidence.
BG	22.87%	-	Low employment, particularly for men, young workers, low-skilled; The youth NEET is significantly worse than the EU-average; Long-term unemployment high and activation is low.
CY	9.55%	-	Youth NEET are higher than the EU-average; Employment rate is above EU but deteriorating.
CZ	35.32%	-	Employment rate of low-skilled is low; Activation is relatively low.
DE	43.26%	14.70%	Activation is decreasing.
DK	26.06%	-	Relatively low employment of non-EU nationals.
EE	35.89%	22.04%	Employment rates of low-skilled low; Youth unemployment is high; Long-term unemployment high indicating structural unemployment; Activation is relatively low; Participation of low-skilled persons in education and training is low.
ES	13.04%	-	High incidence of youth unemployment and NEET; Low employment for elderly workers, men and non-EU nationals; Long-term unemployment very high.
FI	12.63%	1.60%	Youth unemployment high; Employment rate of the low-skilled well below the overall rate; Low participation of age group 60–64; Low activation rate of LTU leads to stagnating numbers.
FR	27.00%	17.48%	Deteriorating youth unemployment; Low employment rate for elderly workers; Low employment rate non-EU nationals.
GR (2010 data)	4.58%	-	Employment sig. below EU average, especially for women and youth; High incidence of NEET; Long-term unemployment is high.
HR (2012 data)	26.59%	-	Employment significantly lower than EU-average especially for men, young and elderly workers (in the age group 55-59); NEET and unemployment for young is particularly high and increasing; Long-term unemployment for youth particularly high.
HU	2.65%	-	Overall low employment rates especially for certain groups (youth, elderly workers and low-skilled); High youth unemployment and increasing NEET rates.
IE	16.14%	-	Employment for both men and women is below the EU average; Unemployment is particularly high among young; Long-term unemployment very high. Activation measures are low.
IT	9.37%	-	Low employment for young NEETs; Low employment for women and non-EU nationals;

Labour market services			
Country	Criteria		
	Share of ALMP expenditure*	Share of ALMP participants*	Key employment challenges
			Long-term unemployment high.
LT	30.88%	2.77%	Employment rates for men, low-skilled and youth are low (for low-skilled significantly). Employment rate for elderly workers is high but deteriorating for both men and women; Unemployment rate of youth is high; Long-term unemployment is high.
LU	10.33%	-	Low employment of elderly workers, in particular elderly females; High youth unemployment; Activation is higher than EU average but shows sig. negative trend.
LV	9.69%	0.15%	Low employment rate; Employment rate for low-skilled low; Unemployment rate for youth (15-24) is higher the EU-average but show significantly positive developments. Youth NEET is high; Long term unemployment is high.
MT	69.04%	-	Despite some positive development, the employment rate remains low especially for elderly females and, low-skilled workers; The inactivity trap for the 2nd couple member is a persisting challenge.
NL	34.76%	37.27%	Low employment rates for non-EU nationals; Low total amount of hours worked.
PL	20.18%	0.23%	Low employment rate of low-skilled; In spite of recent improvements, low employment rate of elderly; High youth unemployment; Hidden unemployment In rural areas, limited shift into off-farm jobs.
PT	20.20%	-	Negative employment rates trend, especially for men, elderly, youth; Youth unemployment rate and youth NEET are above the EU average; Long-term unemployment is higher than the EU-average.
RO	56.19%	-	Employment rates among young, women and elderly people are low; Youth NEETs above EU average, decreasing trend compared to 2011.
SE	23.55%	30.36%	Relatively low employment of non-EU nationals.
SI	29.50%	-	Low employment rates for low-skilled skilled is below EU average; Very low employment rates of elderly workers In particular women; High increase of unemployment rate for the young; Since 2009, long term unemployment rate significantly increased.
SK	24.45%	-	Employment is low for all groups in particular youth and low-skilled; Youth unemployment high; Long-term unemployment significantly higher than the EU-average and the activation is at a lower level than the EU-average.
UK (2009 data)	89.51%	-	Youth unemployment is high and especially young NEET are high.

* The MS-specific total is relative to all the ALMPs (Training, Private and public sector employment incentives and Labour market services). MS-specific total is relative to all the ALMPs (Training, Labour market services and Employment Incentives).

High Expenditure and high Number of Participants: defined as above the EU-28 average or top 25%.

Country-specific challenges: challenges with CIE evidence in the literature.

4.3 Final criteria assessment and conclusions

4.3.1 Results of target group analysis

The report is concluded by presenting a joint analysis of the knowledge gaps according to the three criteria, both for the academic literature and for the EEN database. This is motivated by the general nature of criterion 3, which is not related to a specific area of intervention, but largely refers to key challenges of each Member State in the employment policy area. By focusing on the main labour market challenges regardless of the intervention area, one can jointly take into account the information on knowledge gaps retrieved in the EEN database and in the literature, thus providing an overall discussion.

To measure the level of implementation of employment policies, the total ALMP expenditure and the total participants in ALMPs in each MS are considered, without taking into account the shares related to each intervention area.

In Table 35, the ALMP expenditure as percentage of the national GDP and the total number of ALMP participants are displayed. Countries with the highest values of expenditure and participants are highlighted. As in the previous discussions for each kind of intervention, for each MS the main labour market challenges are listed.

In order to assess which employment challenges indicated in the Employment Performance Monitor and Benchmarks document and which of the corresponding target groups are object of the CIEs included in this report, for the academic literature a particular employment challenge is marked with a tick if at least one paper provides evidence for the effectiveness of at least one intervention addressing it, regardless of the area. For EEN evaluations, given the structure of the database, the information is used regarding the different target groups available for the whole set of interventions without distinguishing among the different areas. A particular employment challenge is marked if the corresponding target group has been covered by at least one intervention regardless of the intervention area (training, incentives, or LMS).

By looking at national values for ALMP in Table 35 one can notice that BE, FR and NL are the only MS with both the total ALMP expenditure and the total participants in ALMPs in the top 25% of the distribution of EU-28. By considering jointly the academic literature and the EEN database as sources for CIEs evaluations, one finds that for BE there exists evidence about the interventions effects only for one of the target groups pointed out within the three national key employment challenges, that is the non-EU nationals. Similarly in FR, only one of the labour force groups indicated in the three national employment challenges (youth unemployment) has been object of CIEs evaluations as a target group in the interventions object of this analysis.

Four of the 28 MS (DK, FI, IE, SE) show percentages of the total ALMP expenditure in the top 25% of the distribution, but their values for the number of ALMP participants are below the EU-28 average. Among these IE is the one with the widest presence of CIEs evaluation, since the group of unemployed has been object of analysis carried out through counterfactual methodologies both in the academic literature and in the EEN database. It is worth mentioning that, instead, DK and SE have not produced any kind of evidence for interventions addressed to the group of non-EU nationals whose unemployment rate is indicated as a main challenge for both MS.

DE, ES, IT, PL are the countries characterised by the highest levels of participation, with the total number of ALMP participants in the top 25% of the distribution of EU-28. Among these, only DE, ES show shares of ALMP expenditure above EU-28 average. PL provides information about the effects of interventions targeted problematic groups indicated in the employment challenges (see footnote 56). For IT, since only interventions targeted to young NEETs have been analysed in the academic literature, more evidence is required for the interventions related to the groups of women, non-EU nationals and long-term unemployed to whom ALPM for employment challenges should be addressed. For DE and ES there is no evidence on activation measures and on interventions targeted to youth unemployed and NEET, elderly workers, non-EU nationals and long-term unemployed, which represent respectively the most problematic areas at national level.

Table 35: Summary on existing findings for ALMP expenditure, ALPM participants and groups nationally recorded as problematic, by country

Criteria for all intervention areas					
Country	ALMP expenditure as % of GDP	Number of ALMP participants	Criteria		
			Key employment challenges	Academic literature	EEN
AT	0.76%	207,595	Low employment rates among elderly people; Low total hours worked for women.		
BE	1.59%	900,275	Low participation of elderly workers; Low participation of non-EU nationals; Above average long-term unemployment incidence.		✓
BG	0.17%	17,891	Low employment, particularly for men, young workers, low-skilled; The youth NEET is significantly worse than the EU-average; Long-term unemployment high and activation is low.	✓	
CY	0.34%	9,708	Youth NEET are higher than the EU-average; Employment rate is above EU but deteriorating.		
CZ	0.28%	58,252	Employment rate of low-skilled is low; Activation is relatively low.		
DE	0.79%	1,415,186	Activation is decreasing.		
DK	2.08%	192,033	Relatively low employment of non-EU nationals.		
EE	0.23%	7,836	Employment rates of low-skilled low; Youth unemployment is high; Long-term unemployment high indicating structural unemployment; Activation is relatively low; Participation of low-skilled persons in education and training is low.		✓ ✓
ES	0.81%	2,744,613	High incidence of youth unemployment and NEET; Low employment for elderly workers, men and non-EU nationals; Long-term unemployment very high.		
FI	0.98%	121,134	Youth unemployment high; Employment rate of the low-skilled well below the overall rate; Low participation of age group 60–64; Low activation rate of LTU leads to stagnating numbers.	✓	
FR	0.93%	1,761,044	Deteriorating youth unemployment; Low employment rate for elderly workers; Low employment rate non-EU nationals.	✓	
GR (2010 data)	0.24%	91,855	Employment sig. under EU average, especially for women and youth; High incidence of NEET; Long-term unemployment is high.		
HR (2012 data)	0.21%	13,638	Employment significantly lower than EU-average especially for men, young and elderly workers (in the age group 55-59); NEET and unemployment for young is particularly high and increasing; Long-term unemployment for youth particularly high.		
HU	0.36%	163,523	Overall low employment rates especially for certain groups (youth, elderly workers and low-skilled); High youth unemployment and increasing NEET rates.		✓
IE	0.85%	86,148	Employment for both men and women is below the EU average; Unemployment is particularly high among young; Long-term unemployment very high. Activation measures are low.	✓	✓ ✓

Criteria for all intervention areas					
Country	ALMP expenditure as % of GDP	Number of ALMP participants	Criteria		
			Key employment challenges	Academic literature	EEN
IT	0.34%	1,216,021	Low employment for young NEETs; Low employment for women and non-EU nationals; Long-term unemployment high.	✓	
LT	0.26%	11,640	Employment rates for men, low-skilled and youth are low (for low-skilled significantly). Employment rate for elderly workers is high but deteriorating for both men and women; Unemployment rate of youth is high; Long-term unemployment is high.		
LU	0.51%	17,330	Low employment of elderly workers, in particular elderly females; High youth unemployment; Activation is higher than EU average but shows sig. negative trend.		
LV	0.37%	29,022	Low employment rate; Employment rate for low-skilled low; Unemployment rate for youth (15-24) is higher the EU-average but show significantly positive developments. Youth NEET is high; Long term unemployment is high.	✓	
MT	0.16%	6,409	Despite some positive development, the employment rate remains low especially for elderly females and, low-skilled workers; The inactivity trap for the 2nd couple member is a persisting challenge.		
NL	1.07%	589,890	Low employment rates for non-EU nationals; Low total amount of hours worked.	✓	
PL	0.42%	585,675	Low employment rate of low-skilled; In spite of recent improvements, low employment rate of elderly; High youth unemployment; Hidden unemployment In rural areas, limited shift into off-farm jobs.	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
PT	0.57%	186,574	Negative employment rates trend, especially for men, elderly, youth; Youth unemployment rate and Youth NEET are above the EU average; Long-term unemployment is higher than the EU-average.	✓ ✓	✓ ✓
RO	0.05%	44,935	Employment rates among young, women and elderly people are low; Youth NEETs above EU average, decreasing trend compared to 2011.		✓
SE	1.05%	270,348	Relatively low employment of non-EU nationals.		
SI	0.36%	20,697	Low employment rates for low-skilled skilled is below EU average; Very low employment rates of elderly workers In particular women; High increase of unemployment rate for the young; Since 2009, long term unemployment rate significantly increased.	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
SK	0.30%	73,290	Employment is low for all groups in particular youth and low-skilled; Youth unemployment high; Long-term unemployment significantly higher than the EU-average and the activation is at a lower level than the EU-average.		
UK (2009 data)	0.38%	67,768	Youth unemployment is high and especially young NEET are high.	✓	✓

High Expenditure and high Number of Participants: defined as above EU-28 average or top 25%.

✓: there exists at least one CIE addressing the country-specific key employment challenge.

4.3.2 Conclusions

By jointly considering the above mentioned criteria, one can evaluate the identified knowledge gaps about labour market interventions on the basis of the importance of interventions, defined in terms of both size (expenditure and participants) and the political relevance of measures needed in each country to address their particular employment challenges.

The present report has first highlighted which countries, among the EU-28 MS, are characterised by the highest level of ALMP expenditure and participants. Secondly, for these countries with high level of ALMP implementation in the past programming period, key employment challenges indicated for the following period were considered, to assess whether there exists empirical evidence for these particular policy areas and for the groups of the labour force to whom future interventions should be addressed.

The joint analysis, for each MS, of problematic areas and available CIE evidence has allowed us to conclude that BE, FR, FI, IE, IT, NL and PL are the only countries, with both ALMP expenditure and participants, or at least one parameter, in the top 25% of the distribution of EU-28, where interventions related to problematic employment areas have been evaluated through counterfactual methodologies.

The present report has identified countries for which, despite the high level of ALMP expenditure and high number of participants, there is a lack of evidence about the effectiveness of employment policies: DK, SE, DE, ES. For these MS, given the wide implementation of ALMP and the presence of several challenges which will require the implementation of additional policies in the future programming period, the identified knowledge gaps need to be filled with more urgency.

Finally, remark that AT, CY, CZ, GR, HR, LT, LU, MT and SK do not provide information through counterfactual methodologies about the future employment challenges listed in the monitor. Although for these countries the past level of expenditure and the number of participants in ALMP do not correspond to the highest values of the EU-28 MS, since several challenges have been identified for the next programming period, more evaluations will be needed to assess the effectiveness of future interventions which should be targeted to the identified problematic areas and groups of the labour market.

5 Conclusions

As Europe is facing the challenging situation of **high unemployment** and **tightened budgets**, more evidence on labour and social inclusion policies is needed. Therefore, the emphasis in the 2014-2020 programming period is put on evaluating the impact of policies and the European Commission (EC) is encouraging MS to increase efforts in this direction by commissioning and implementing counterfactual impact evaluations (CIEs). Measuring the impact of a given intervention by CIE involves the comparison of the actual situation to the one that would have happened in the absence of the intervention, and ultimately informs about the **causal effect** of the intervention.

Unlike other types of evaluations, CIE informs about the **causal effect** of a policy on its recipients. The distinctive feature of CIE is thus that it measures the impact of a given policy intervention by comparing the actual situation to the one that would have happened in the absence of the intervention. As such, CIE compares e.g. labour market outcomes of those who benefited from a policy (treated group) with outcomes of a so-called ‘control group’ of individuals, who are similar in all characteristics to the policy beneficiaries but their recipient status.

In this report, the review of existing evidence of the effect of labour market policies is based on two sources of information. First, a search of **academic papers** is run using keywords related to labour market and evaluation issues in the data bases SCOPUS, RePEc, IDEAS and SSRN. Second, the report relies on CIE of ESF funded interventions reported in the **European Social Fund Expert Evaluation Network database (ESF-EEN)**. This data base managed by the Director General (DG) for Employment, Social Affairs and Inclusion gathers information provided by member states about the contribution of the ESF in each EU country. For the academic papers, evidence published from 2006 until 2013 is considered, while the ESF-EEN database covers the period from 2007 to 2013. The papers extracted from the two databases examine the effect of labour market policies on individuals’ job prospects.

For the eight-year academic publication period, 76 papers were retrieved (with an annual average of 9.5) and for the seven-year period covered by the ESF-EEN, 39 evaluations were found (with an annual average of 5.5) that aim at measuring causal evidence of labour market policies. On average, focusing on the years 2007 to 2013 and for the entire EU28, this amounts to only 15 annual sources of evidence on labour market policies. Comparing the number of CIE found and the amount of ESF-related funds spent annually, roughly one CIE of labour market policies is published for every billion of Euros spent.

This scarcity of CIEs is reflected in the title of this report, where ‘knowledge gaps’ refer to lack of information on the causal effects of ESF policies, given that there is more to report on the gap than on the knowledge. The recognition of this lack of knowledge will hopefully stimulate interest and activity to overcome it in the near future. This goes hand-in-hand

with EU provisions for the 2014-2020 programming period, which provide stimuli to increase member states' use of CIE.

The unit of analysis in this report is '**findings**' and not academic papers. *Academic papers* very often do not just describe one policy intervention, but several ones. On average, 76 papers were found for a total of 146 interventions, with 7 being the maximum and 1 the minimum within each paper. Very often, academic papers do not just measure one 'effect' of a policy intervention, but aim at measuring heterogeneous 'effects'. For example, one can measure the impact of training on labour market chances for the young or elderly, for women and men. Each of those impacts is considered a separate finding. Out of 146 interventions, 173 reported findings were identified, with a maximum of 10 and a minimum of 1 per paper.

This report has three foci: the **first** one is to list countries, target groups and time of intervention that lack CIE results. **Second**, for those interventions for which there is evidence, the report examines whether different papers come to the same conclusions on what policies work and for whom. For this later analysis, the **outcome variable** is usually taken to be the **probability of employment**; a small number of papers also discuss other outcomes, such as the probability of being in regular employment or the probability of remaining in employment. **Third**, the report aims at evaluating the relative importance of each knowledge gap using measures of policy costs and the number of beneficiaries.

The report focuses on labour market policies, which are generally categorised into the following three main areas: 1) **Training**, 2) **Private and public sector employment incentives**, and 3) **Labour market services**. The main results are the following.

Very limited or no CIE evidence is found for the following target groups: **disadvantaged young unemployed, elderly unemployed, low-skilled unemployed, employed, inactive, disabled and women**.

In addition, there is massive contrast of **CIE-based evidence between Eastern and Western Europe**. Evidence on effects of labour market policy is concentrated on the countries Germany, Sweden, Denmark, the UK, France and Portugal. The only Eastern European countries where CIEs have been conducted are Poland, Romania, Estonia, Slovenia, Bulgaria and Latvia (generally only one paper per country).

Different CIE methods exist, the most common being Randomisation, Regression Adjustment techniques, Propensity Score Matching (PSM), Difference-in-differences (DID), Regression Discontinuity Design (RDD) and Instrumental Variables (IV). Each of these methods makes different assumptions about the comparability of the treated and the control groups. The assumptions are greatest and most difficult to meet for Regression Analysis followed by PSM, while randomisation theoretically would not need any assumptions.

The best method to use is the one with the least restrictive assumptions. This is because if assumptions of a CIE method are not met, the estimated policy effect can be biased. In general, the choice of the method should be determined by the circumstances under which the policy is conducted and under which the data are collected (including eligibility criteria and policy design, such as in the case of RDD).

Results show that most of the reported findings derive from Propensity Score Matching (PSM). This implies a relatively single sided examination of policy effects and a clear gap in terms of results on methods that relax PSM assumptions, like Randomisation, DID, IV and RDD. While the use of PSM may derive from the apparently simple structure of the method, it may not be always the best method to use.

The two data sources coherently show that about half of the papers are concerned with the effectiveness of training, while the other half is divided between private and public sector employment incentives and labour market services.

Being published between 2006 and 2013, the papers refer to policy interventions implemented in the time interval from 1986 to 2009. On average across papers, the difference between year of implementation of the policy and year of publication of the CIE results is **8.3 years**. This **time gap** may be upwards biased, because academic papers comprise both working papers and journal articles, the latter usually requiring several years between paper submission and publication. In addition, some of the papers measure **medium or long-term effects**, so that several years need to pass after the end of the intervention before the analysis can be conducted.

In order to measure the sensitivity of these results to the choice of sample period, the report includes a comparative analysis that examines 102 paper published in the period from 2000 (instead of 2006) and 2013. This increase in the time span, however, does not impact greatly on the results found.

The effect of labour market policies depends (among other things) on the specific time of intervention, the country, the specific policy features and the concurrent labour market conditions. Nevertheless, the report investigates whether communalities of success and failure of labour market policies can be detected on an aggregated level. This can be done by conducting meta-analyses that summarise the research findings of a variety of different papers.

The second half of this report is dedicated to such a meta-analysis. Like all meta-analyses, also the present one suffers from a relative small sample size, especially once findings are disaggregated into different sub-policy areas and target groups. As a consequence, the more findings are focused on a specific area and target group, the higher is the level of uncertainty of the meta-analysis reported in the following.

Each specific kind of intervention has varying ‘effects’ on labour market chances depending on type of beneficiary, country etc. This gives rise to **effects heterogeneity**.

More specifically, most interventions of **short classroom/vocational training** and **on the job training generally** show positive effects on labour market integration. **Training starting early** in the unemployment spell, i.e. between months 0 to 6, is generally effective. For treatments starting **during months 7-12** of the unemployment spell, short-term interventions yield positive significant results.

The majority of the positive significant findings are driven by findings on **private sector incentives** interventions (19 out of the 25 findings in that category are significantly positive). Consistent with previous literature, job creation schemes and other types of interventions aimed at the **public sector** are often ineffective. Only two papers are identified that evaluate interventions based on the timing of the treatment during the unemployment spell; both show a significant increase in employment chances if treatment starts **after the 6th or 7th unemployment month**.

Labour market services include job-search assistance, counselling and monitoring, and job placement/relocation assistance. 40% of all findings on policy effectiveness measure insignificant effects on recipients’ labour market chances. Among interventions that show significant effects, the **majority refer to job-search assistance**. There is generally no significant gender difference in this effect.

Two criteria are applied jointly, which measure the political relevance of the intervention types. They are analysed with reference to known country-specific employment challenges. The criteria are:

- 1) **share of expenditure on each intervention** as a percentage of total labour market policy expenditure in each member state and
- 2) **share of participants in each intervention** as a percentage of total participants in each member state.

By applying both criteria for **Training** programs, 4 member states are found with both expenditure and number of participants in the two top 25% distributions: Austria, Finland, Ireland, and Portugal. However, only for Finland and Ireland there exists evidence of CIEs evaluating training programs addressing their respective key employment challenges.

Regarding **Private and public sector employment incentives**, 4 member states are identified with both expenditures and number of participants in the two top 25% distributions: Greece, Hungary, Poland and Slovakia. None of these member states address their respective employment-problematic areas through CIEs.

For the intervention type **Labour market services**, only one member state is found with both expenditures and number of participants in the two top 25% distributions: the

Netherlands. In this member state, CIE methods have been adopted to evaluate interventions addressing the country's key employment challenges.

The report goes further by focusing on different quantiles of the criteria distribution. However, the general result is that even countries with high national spending and many beneficiaries do not employ CIE for measuring the causal effect of labour market policies.

Results also show that the majority of member states lack any published CIE evidence in the ESF-EEN database, which is in most cases a direct consequence of missing data or data not designed for the performance of CIE evaluation. As a result, in several cases of CIE evidence collected by member states, often important quantitative information, regarding the size of the effect, the sample size or participants' characteristics, is not available. This type of information seems neglected from the very first stage of data collection, and henceforth CIE results appear mostly anecdotal.

Using CIE evidence from the academic literature is not a panacea solution either. It is likely that papers which end up being published are those which find an effect of a policy (the so-called '**publication bias**'), so that the positive significant results reported here could be upward biased. In addition, bias stemming from the repeated use of the same database by academic researchers is also possible.

In addition, for different intervention areas authors of published papers are often the same. This indicates the lack of a well-established CIE evaluation tradition, not only among the member states but also in the academic world.

The meta-analysis presented in this report can hopefully serve as a map for guiding the planning of future CIE of labour and social inclusion policies in Europe. The report provides additionally some indications on the effectiveness of the interventions such as training, private and public employment incentives, and labour market services. The main message of the report is that, given the importance in terms of number of participants involved and money spent, the measurement of causal effects of labour market policies using CIE has received too little attention so far.

6 Recommendations

1 Plan data collection ex ante

The lack of information on causal policy effectiveness could be explained by the specific data necessities of CIE. Generally, data collection needs to be planned before the introduction of the policy in order to make it possible to have information **both on individuals that are** (treated group) **and individuals that are not beneficiaries of the policy** (control group).

Knowledge of CIE methods and planning skills are essential. The beginning of the new ESF programming period 2014-2020 appears particularly fit for **integrating this phase in the current practice of ESF management**.

It is possible to envisage that several stakeholders could jointly work on the planning phase of CIE, including ESF Managing Authorities of member states and the European Commission. The author of this report, the Centre for Research of Impact Evaluation (**CRIE**) of the European Commission Joint Research Centre (DG JRC), is committed to provide methodological support to member states and DG EMPL in order to make the planning of data collection feasible, to learn from other existing studies and best practice, to provide help on current planning and evaluation and to build networks among CIE evaluators in different member states.

2 Perform recurrent CIE

The remedies to improve job creation and quality in one country today may differ from those needed in another country tomorrow. This is called lack of **external validity**.

Even if information on CIE is available for a country at some point in the past, it is important for the same country to plan to perform a CIE also on the current implementation of the policy. This implies that CIE should be performed **recurrently**. This will create a virtuous cycle of policy design of evaluation, where evidence from the effectiveness of the policy in the past is used to devise better policy for the future.

Conducting CIE appears even more important in the current presence of **knowledge gaps** as documented in this report.

3 Disseminate information and data of past CIE

While there is in general a lack of external validity, lessons on how to conduct a proper CIE can be drawn from existing experiences and data.

In order to make existing studies available, it is recommended that the **European Commission develops an easily accessible archive** listing all relevant CIE studies, such as the

ones analysed in this report. This database could be updated regularly, and made to include records of all existing academic studies using CIE for estimating the effect of labour market policies. For each study, information on the policy, the country and time of intervention, the target group, CIE method used and found effect should be provided. Such an up-to-date database is envisaged to serve as a key tool for both policy makers and academic researchers.

It is also recommended that the European Commission aims to **collect individual data used in current and past CIE** of the type reviewed in this report. These data should be made as widely available as possible. Data availability would help to foster a more widespread CIE culture, and stimulate application of CIE methods among practitioners and academics.

List of Acronyms

AA	Administrative Agreement
ALMP	Active Labour Market Policy
AT	Austria
BE	Belgium
BG	Bulgaria
CH	Switzerland
CIE	Counterfactual Impact Evaluation
CRIE	Centre for Research on Impact Evaluation
CY	Cyprus
CZ	Czech Republic
DE	Germany
DG EMPL	Directorate General for Employment, Social Affairs and Inclusion
DID	Difference-in-differences
DK	Denmark
EC	European Commission
EE	Estonia
EEN	Expert Evaluation Network
ES	Spain
ESF	European Social Fund
EU	European Union
FI	Finland
FR	France
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
IV	Instrumental variable
LMS	Labour Market Services
LT	Lithuania
LTU	Long-term unemployment
LU	Luxembourg
LV	Latvia
MA	Managing Authorities
MS	Member State
MT	Malta
NEET	Not (engaged) in Education, Employment or Training
NL	Netherlands
NO	Norway
No.	Number
NSRF	National Strategic Reference Frameworks

NZ	New Zealand
OECD	Organisation for Economic Co-operation and Development
OP	Operational Programme
PL	Poland
PSM	Propensity Score Matching
PT	Portugal
RDD	Regression discontinuity design
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
SWOT	Strengths, Weaknesses, Opportunities, and Threats
UK	United Kingdom
US	United States of America
VBA	Visual Basic for Applications

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Intervention area 1: Training

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Intervention area 2: Private sector employment incentives and public sector employment

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Intervention area 3: Labor market services

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